

MISSOURI SPECIES AND COMMUNITIES* OF CONSERVATION CONCERN



Spotted skunk

Checklist
JANUARY 2010

*Terrestrial Natural Communities. Does not include aquatic, geologic or cave communities.

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NOTICE: Please submit reports of all sightings of species and natural communities listed in this checklist on the forms provided in the back of this checklist. Special criteria apply to birds and reports should follow the guidelines listed in Appendix A.

INTRODUCTION

The Department of Conservation is charged with the protection and management of Missouri's fish, forest, and wildlife resources. In the brief time since the settlement of Missouri, many plants and animals have declined to levels of concern and some have disappeared entirely. The species cataloged in this checklist represent 18 percent of the native vascular plants, 14 percent of the nonvascular plants and 28 percent of the vertebrate animals in Missouri. Together, the animals, plants, and natural communities represent Missouri's biological diversity—a heritage worth protecting.

The Department maintains two references relating to the status of listed plants and animals in Missouri; the *Missouri Species of Conservation Concern Checklist* and the *Wildlife Code of Missouri*. The *Missouri Species of Conservation Concern Checklist* is utilized mostly for planning and communication purposes; however, **native invertebrate species listed herein have legal protection under the Wildlife Code. These native invertebrates may only be collected and held by holders of a Wildlife Collector's Permit as described in Rule 3CSR10-9.110(1)(B).** All species in the State of Missouri are protected as biological diversity elements unless a method of legal harvest is described in the *Wildlife Code*. Species listed in the *Wildlife Code* under 3CSR10-4.111 are protected by the State Endangered Species Law 252.240. Some of the plants and animals in the checklist also appear in the *Wildlife Code* and are afforded special legal protection. All federally endangered and threatened plants and animals are protected by the Endangered Species Act of 1973 (ESA) and by Missouri State Endangered Species Law.

How to use the checklist

The checklist, developed with the cooperation of specialists throughout the state, is a list of plants, animals, and natural communities the Department of Conservation is particularly concerned about due to population declines or apparent vulnerability. The state rank (SRANK) shows the level of concern for each species' continued existence in Missouri. For each Element (i.e., species, subspecies or variety, or natural community type), at least 6 basic factors are considered when assigning an SRANK:

- the estimated number of Element Occurrences (EOs) throughout the Element's state range
- the estimated state abundance of the Element (measured by population, area, or stream length)
- the estimated size of the Element's state range
- the trend in the Element's distribution over its state range
- the estimated number of adequately protected EOs throughout the Element's state range
- the degree to which the Element is threatened in the state

The checklist also indicates, for each lichen, plant, and animal Element in the heritage inventory, information on the Element's global rank (i.e., its relative rarity or endangerment in the world). This is useful for understanding the relative rarity or endangerment of an Element from a global perspective (beyond state, national, or regional boundaries). Global ranks (i.e., GRANKS), are completed by the Heritage/Conservation Data Center personnel and/or NatureServe. For each Element, the same six factors listed above for SRANKS are considered when assigning GRANKS, but in a global context. Additionally, the fragility or susceptibility of the Element to intrusion or disturbance is considered when assigning a global rank.

The Global and State Ranking System methodology was developed and provided by The Nature Conservancy, Conservation Science Division, in association with the Network of Natural Heritage Programs and Conservation Data Centers. NatureServe 2005. NatureServe Central Databases. Arlington, Virginia. U.S.A.

The checklist is arranged by broad taxonomic groups (e.g., terrestrial natural communities, flowering plants, insects, fish, and mammals). Within each group, species are arranged alphabetically by their scientific names and terrestrial natural communities by community type. Each Element is identified by its scientific name, common name, federal status, state status, global rank, and state rank.

TERMS AND DEFINITIONS

FEDERAL STATUS

The federal status is derived from the provisions of the Endangered Species Act of 1973, as amended, which is administered by the U.S. Fish and Wildlife Service. Passage of the Endangered Species Act of 1973 gave the United States one of the most far-reaching laws ever enacted by any country to prevent the extinction of imperiled animals and plants. Protecting endangered and threatened species and restoring them to the point where their existence is no longer jeopardized is the primary objective of the Fish and Wildlife Service's Endangered Species Program.

E: Endangered: Any species which is in danger of extinction throughout all or a significant portion of its range.

T: Threatened: Any species which is likely to become endangered within the foreseeable future.

C: Candidate: Plants or animals which the Service is reviewing for possible addition to the list of endangered and threatened species.

PE: Proposed Endangered: Species officially proposed for listing as endangered; final ruling not yet made.

PT: Proposed Threatened: Species officially proposed for listing as threatened; final ruling not yet made.

STATE STATUS

Rule 3CSR10-4.111 of the *Wildlife Code of Missouri* and certain state statutes apply to state *Code* listed species.

E: "Endangered": Determined by the Department of Conservation under constitutional authority.

GLOBAL RANK

A numeric rank (G1 through G5) of relative endangerment based primarily on the number of occurrences of the Element (i.e., species, subspecies, or variety) globally. Other factors in addition to the number of occurrences are considered when assigning a rank, so the numbers of occurrences suggested for each numeric rank below are not absolute guidelines.

G1: Critically Imperiled: Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) or acres (<2000) or linear miles.

G2: Imperiled: Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction or elimination. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or linear miles (10 to 50).

GLOBAL RANK (Cont.)

G3: Vulnerable: Vulnerable globally either because very rare and local throughout its range, found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction or elimination. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

G4: Apparently Secure: Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.

G5: Secure: Common; widespread and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.

G#G#: Range Rank: A numeric range rank (e.g., G2G3) is used to indicate uncertainty about the exact status of a taxon. Ranges cannot skip more than one rank (e.g., GU should be used rather than G1G4).

GNR: Not Ranked: Status has not been assessed.

GU: Unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends. Note: Whenever possible, the most likely rank is assigned and the question mark qualifier is added (e.g., G2?) to express uncertainty, or a range rank (e.g., G2G3) is used to delineate the limits (range) of uncertainty.

GH: Possibly Extinct/Extirpated: Known from only historical occurrences, but may nevertheless still be extant; further searching needed.

GX: Presumed Extinct: Believed to be extinct throughout its range. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SUBRANK:

T: Taxonomic Subdivision: Rank applies to a subspecies or variety.

QUALIFIERS:

?: Inexact Numeric Rank: Denotes inexact numeric rank. (The ? is not used in combination with range ranks.)

Q: Questionable Taxonomy: Distinctiveness of this entity as a taxon or community at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, inclusion of this taxon in another taxon, or inclusion of this community within another community, with the resulting Element having a lower-priority (numerically higher) conservation status rank.

STATE RANK

A numeric rank (S1 through S5) of relative endangerment based primarily on the number of occurrences of the Element (i.e., species, subspecies, or variety) within the state. Other factors considered when assigning a rank include: abundance, population trends, distribution, number of protected sites, degree of threat, suitable habitat trends, level of survey effort and life history. Thus, the number of occurrences suggested for each numeric rank below are not absolute guidelines. Missouri species of conservation concern typically do not fall within the range of S4-S5.

S1: Critically Imperiled: Critically imperiled in the nation or state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000).

S2: Imperiled: Imperiled in the nation or state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the nation or state (1,000 to 3,000). Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).

S3: Vulnerable: Vulnerable in the nation or state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

S4: Apparently Secure: Uncommon but not rare, and usually widespread in the nation or state. Possible cause of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals.

S5: Secure: Common, widespread, and abundant in the nation or state. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.

S#S#: Range Rank: A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the Element. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

S?: Unranked: Species is not yet ranked in the state.

SU: Unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SE: Exotic: An exotic established in the state; may be native in nearby regions (e.g., house finch or catalpa in eastern U.S.)

SA: Accidental/Nonregular: Accidental or casual in the state (i.e., infrequent and outside usual range).

SP: Potential: Potentially occurring in the state but no occurrences reported.

SR: Reported: Element reported in the state but without persuasive documentation which would provide a basis for either accepting or rejecting (e.g., misidentified specimen) the report.

SRF: Reported Falsely: Element erroneously reported in the state and the error has persisted in the literature.

STATE RANK (Cont.)

SH: Historical: Element occurred historically in the state (with expectation that it may be rediscovered). Perhaps having not been verified in the past 20 years, and suspected to be still extant.

SX: Extirpated: Element is believed to be extirpated from the state.

QUALIFIERS:

?: Inexact or Uncertain: Denotes inexact or uncertain numeric rank. (The ? qualifies the character immediately preceding it in the SRANK. The ? is not used in combination with range ranks.)

SPECIES CHANGES

STATUS CHANGES

PLANTS

Carex microdonta (a sedge) from SH to S1 based on two existing MO specimens from Howell and Reynolds Counties from 1990 and 1992 that were recently annotated by a specialist.

Carex reznicekii (a sedge) from SU to S2? based on additional occurrences from Bollinger, Shannon, and Washington Counties.

Platanthera leucophaea (Eastern Prairie Fringed Orchid) from SH to S1 based on a 2009 collection in Grundy County by Tom Nagel, MDC Natural History Biologist.

Tipularia discolor (Crane-fly Orchid) from S1 to S2 based on additional occurrences from Bollinger, Wayne, and Madison Counties.

INSECTS

Somatochlora hineana (Hine's Emerald) from S1 to S2 because there are 30 records from Missouri.

FISH

Noturus placidus (Neosho Madtom) from S2 to S1 due to this species only being known from a 15-mile stretch of the Spring River in Missouri and during the last 6 years of annual monitoring low numbers of individuals have been collected. Missouri populations also have increased conservation value as other parts of the species distribution decline.

BIRDS

Haliaeetus leucocephalus (Bald Eagle) no state status (formerly E). From 1981 through 1990, MDC, the U.S. Fish and Wildlife Service, and other partners released 75 young eagles at Schell Osage CA and Mingo NWR. Since then, the species has undertaken a remarkable recovery, going from a few pairs in the early 1990s to at least 150 nesting pairs in 2007. Given their remarkable recovery and continued rapid population growth, Bald Eagles are no longer vulnerable to extirpation from Missouri.

Tyto alba (Barn Owl) no state status (formerly E). While Barn Owls continue to be rare and sparsely distributed in Missouri, as they have historically been in northern part of their range, the overall status of the species in Missouri is likely to remain secure, and Barn Owls are not likely to be vulnerable to extirpation given that the species has adapted so well to utilizing human-altered habitats. Recent population trends in Missouri appear to be positive, as many new nests have been found in new areas in recent years, and large brood sizes have been reported. Also, only 11 records were reported during Breeding Bird Atlas work from 1986-1992, compared with a total of 90 nesting locations listed in the MDC Natural Heritage Database as of 05/2009.

MAMMALS

Mustela frenata (Long-tailed Weasel) from S2 to S3 due to 41 occurrences in 29 counties across the state and because a recent study using camera-traps indicates they are more common than we thought.

Mustela nivalis (Least Weasel) from S4 to S3 due to only 9 occurrences in 6 northern counties.

Myotis austroriparius (Southeastern Bat) from SU to S1 due to recent captures in southeast Missouri.

Ochrotomys nuttalli (Golden Mouse) from S3? to S3 based on increased knowledge from a recent study.

ADDITIONS

PLANTS

Carex cumberlandensis (a sedge) as S1; a new state record based on existing specimens from Bollinger and Iron Counties in 1993 and 1995 that were recently annotated by a specialist.

Listera australis (Southern Twayblade) as S1 based on a 2009 observation by Justin Thomas as a new state record in Stoddard County.

MOLLUSKS

Epioblasma turgidula (Turgid Blossom) as SX. Historically known from the Black and upper White rivers in Missouri, the Turgid Blossom is now considered extinct.

INSECTS

Cicindela celeripes (Carabidae: Cicindelitae) as S1 based on first Missouri collection of this rare Great Plains specialist from Atchison and Holt Counties by Ted C. MacRae and Christopher R. Brown.

Nehalenia gracilis (Coenagrionidae) as S1? based on first Missouri collection of this damselfly since 1930.

MAMMALS

Lasionycteris noctivagans (Silver-haired Bat) as SU because of their unknown status and distribution.

Tadarida brasiliensis (Brazilian Free-tailed Bat) as SA due to the capture of 1 male in Johnson County and the recovery of 1 bat in St. Louis County.

DELETIONS

INSECTS

Anax longipes (Comet Darner) from S3 to S4 because recent surveys have demonstrated that this species is much more widespread than previously understood. It has been found at many sinkhole ponds, spring-fed ponds, and even strip mine ponds.

Gomphus ozarkensis (Ozark Clubtail) from S3 to S4 because recent surveys have demonstrated that this species is much more widespread than previously understood. In many localities in the Ozarks it is one of the commonest and most conspicuous species.

Macromia pacifica (Gilded River Cruiser) from S3 to S4 because surveys by Linden Trial and observations by others have documented this species on many high quality streams extending from the Ozarks in southern Missouri north to streams in the Glaciated Plains.

Ophiogomphus westfalli (Westfall's Snaketail Dragonfly) from S3 to S4 because this is a common Ozark stream species that is also often found foraging in nearby fens – adults have been collected in over 20 counties, and it is one of the most widely distributed species in the Missouri Ozarks.

Tachopteryx thoreyi (Gray Petaltail) from S3 to S4 because this species has been observed in nearly every fen and woodland seep inventoried while searching for Hine's Emerald.

FISH

Cyprinus elongatus (Blue Sucker) from S3? to S3S4 due to its wide distribution in Missouri and the large number of individuals captured by biologists and scientists.

DELETIONS (Cont.)

FISH (Cont.)

Polyodon spathula (Paddlefish) will remain an S3 species but will no longer be tracked because it can be harvested and its population is currently being supplemented by stockings in Missouri.

TAXONOMIC CHANGES

CRUSTACEANS

Orconectes meeki to *Orconectes meeki meeki* (Meek's crayfish). There are two recognized sub-species of Meek's crayfish: *Orconectes meeki meeki* and *O. meeki brevidens*. Both sub-species occur in Arkansas but only *O. m. meeki* occurs in Missouri.

FISH

Etheostoma vivax to *Ammocrypta vivax* (Scaly Sand Darter).

Lepisosteus spatula to *Atractosteus spatula* (Alligator Gar).

Notropis amnis to *Hybopsis amnis* (Pallid Shiner).

TERRESTRIAL NATURAL COMMUNITIES

In addition to lichens, plants, and animals, the Missouri Natural Heritage Program tracks occurrences of high quality natural communities. Terrestrial natural communities are interrelated assemblages of plants, animals, and other living organisms incorporated into their physical surroundings- including geologic substrate, soils, topography and aspect- that are shaped by climate and other natural processes. High quality sites are ones that provide diverse assemblages of native species and represent the least distressed examples of ecosystems that existed in Missouri prior to European settlement. These natural communities frequently provide the habitat necessary for Missouri's listed lichens, plants, and animals. Because the Missouri Department of Conservation tracks occurrences of high quality natural communities, we encourage the submission of site information on natural communities as we do for species listed in this Checklist.

State ranks are assigned to natural communities using criteria that are similar to species SRANKs. (Criteria include total number of occurrences, number of occurrences by grade [A-D], total acres, number of counties in which the community type occurs, number of protected occurrences, and threats.) Global ranks are not applied to communities due to the difficulty in reconciling Missouri's classification system with larger scale classifications.

Natural community types have been classified using The Terrestrial Natural Communities of Missouri (Nelson, 2005). This classification system was developed to accomplish an inventory of the state's natural communities, prioritized by quality, size and distribution, to help meet land protection goals. The Terrestrial Natural Communities tracked in Heritage (high-quality examples) are listed below with their SRANKs by major community type.

COMMUNITY TYPE

FOREST

SRANK

Dry-Mesic Loess/Glacial Till Forest	S3
Mesic Loess/Glacial Till Forest	S3
Dry-Mesic Limestone/Dolomite Forest	S3
Mesic Limestone/Dolomite Forest	S3
Dry-Mesic Chert Forest	S4
Dry-Mesic Sandstone Forest	S3
Mesic Sandstone Forest	S2
Dry-Mesic Sand Forest	S1
Mesic Sand Forest	S1
Dry-Mesic Igneous Forest	S4
Dry-Mesic Bottomland Forest	S3
Mesic Bottomland Forest	S2
Wet-Mesic Bottomland Forest	S2
Wet Bottomland Forest	S3
Riverfront Forest	S4
Total Forest Types:	15

WOODLAND	<u>SRANK</u>
Dry Loess/Glacial Till Woodland	S3
Dry-Mesic Loess/Glacial Till Woodland	S3
Dry Limestone/Dolomite Woodland	S3
Dry-Mesic Limestone/Dolomite Woodland	S3
Dry Chert Woodland	S4
Dry-Mesic Chert Woodland	S4
Dry Sandstone Woodland	S3
Dry-Mesic Sandstone Woodland	S3
Dry Sand Woodland	S1
Dry-Mesic Sand Woodland	S2
Dry Igneous Woodland	S4
Dry-Mesic Igneous Woodland	S4
Upland Flatwoods	S2
Bottomland Flatwoods	S1
Sinkhole Flatwoods	S2
Dry-Mesic Bottomland Woodland	S2
Mesic Bottomland Woodland	SH
Wet-Mesic Bottomland Woodland	S1
Total Woodland Types:	18

SAVANNA	<u>SRANK</u>
Dry-Mesic Loess/Glacial Till Savanna	S1
Mesic Loess/Glacial Till Savanna	SH
Limestone/Dolomite Savanna	SH
Chert Savanna	SH
Sandstone/Shale Savanna	SH
Sand Savanna	S1
Total Savanna Types:	6

PRAIRIE	<u>SRANK</u>
Dry Loess/Glacial Till Prairie	S2
Dry-Mesic Loess/Glacial Till Prairie	S1
Mesic Loess/Glacial Till Prairie	S1
Dry Limestone/Dolomite Prairie	S2
Dry-Mesic Limestone/Dolomite Prairie	S2
Dry-Mesic Chert Prairie	S3
Dry-Mesic Sandstone/Shale Prairie	S3
Sand Prairie	S1
Prairie Swale	S2
Hardpan Prairie	S2
Wet-Mesic Bottomland Prairie	S1
Wet Bottomland Prairie	S1
Total Prairie Types:	12

GLADE	<u>SRANK</u>
Limestone Glade	S2
Dolomite Glade	S3
Chert Glade	S2
Sandstone Glade	S2
Igneous Glade	S3
Total Glade Types:	5

CLIFF/TALUS	<u>SRANK</u>
Dry Limestone/Dolomite Cliff	S5
Moist Limestone/Dolomite Cliff	S4
Dry Sandstone Cliff	S4
Moist Sandstone Cliff	S3
Dry Chert Cliff	S3
Moist Chert Cliff	S2
Dry Igneous Cliff	S4
Moist Igneous Cliff	S4
Unconsolidated Bluff	S3
Limestone/Dolomite Talus	S4
Igneous Talus	S4
Total Cliff/Talus Types:	11

STREAM EDGE	<u>SRANK</u>
Sand Bar	S3
Gravel Wash	S3
Stream Bank/River Bank	S2
Total Stream Edge Types:	3

WETLAND	<u>SRANK</u>
Marsh	S2
Shrub Swamp	S2
Swamp	S1
Pond Marsh	S1
Pond Shrub Swamp	S2
Pond Swamp	S1
Ozark Fen	S2
Prairie Fen	S2
Forested Fen	S2
Glacial Fen	S1
Acid Seep	S2
Saline Seep	S1
Limestone/Dolomite Spring	S3
Total Wetland Types:	13

CAVE	<u>SRANK</u>
Cave	S4
Cave Spring	S4
Spring	S4
Total Cave Types:	3
Total Terrestrial Natural Communities:	86

THREATENED AND ENDANGERED SPECIES IN MISSOURI

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATE¹ STATUS</u>	<u>FEDERAL² STATUS</u>
PLANTS			
<i>Asclepias meadii</i>	Mead's Milkweed	Endangered	Threatened
<i>Boltonia decurrens</i>	Decurrent False Aster	Endangered	Threatened
<i>Geocarpa minimum</i>	Geocarpa	Endangered	Threatened
<i>Helenium virginicum</i>	Virginia Sneezeweed	Endangered	Threatened
<i>Isotria medeoloides</i>	Small Whorled Pogonia ³	Endangered	Threatened
<i>Lindera melissifolia</i>	Pondberry	Endangered	Endangered
<i>Physaria filiformis</i>	Missouri Bladder-pod	Endangered	Threatened
<i>Platanthera leucophaea</i>	E. Prairie Fringed Orchid ³	Endangered	Threatened
<i>Platanthera praecleara</i>	W. Prairie Fringed Orchid	Endangered	Threatened
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	Endangered	Endangered
MOLLUSKS			
<i>Antrobia culveri</i>	Tumbling Creek Cavesnail	Endangered	Endangered
<i>Cumberlandia monodonta</i>	Spectaclecase		Candidate
<i>Elliptio crassidens</i>	Elephantear	Endangered	
<i>Epioblasma florentina curtisii</i>	Curtis Pearlymussel	Endangered	Endangered
<i>Epioblasma triquetra</i>	Snuffbox	Endangered	
<i>Fusconaia ebena</i>	Ebonyshell	Endangered	
<i>Lampsilis abrupta</i>	Pink Mucket	Endangered	Endangered
<i>Lampsilis higginsii</i>	Higgins Eye	Endangered	Endangered
<i>Lampsilis rafinesqueana</i>	Neosho Mucket		Candidate
<i>Leptodea leptodon</i>	Scaleshell	Endangered	Endangered
<i>Plethobasus cyphus</i>	Sheepnose	Endangered	Candidate
<i>Potamilus capax</i>	Fat Pocketbook	Endangered	Endangered
<i>Quadrula fragosa</i>	Winged Mapleleaf	Endangered	Endangered
INSECTS			
<i>Nicrophorus americanus</i>	American Burying Beetle ³	Endangered	Endangered
<i>Somatochlora hineana</i>	Hine's Emerald Dragonfly	Endangered	Endangered
FISH			
<i>Acipenser fulvescens</i>	Lake Sturgeon	Endangered	
<i>Amblyopsis rosae</i>	Ozark Cavefish	Endangered	Threatened
<i>Cottus</i> sp. 8	Grotto Sculpin		Candidate
<i>Crystallaria asprella</i>	Crystal Darter	Endangered	
<i>Etheostoma cragini</i>	Arkansas Darter		Candidate
<i>Etheostoma fusiforme</i>	Swamp Darter	Endangered	
<i>Etheostoma histrio</i>	Harlequin Darter	Endangered	
<i>Etheostoma nianquae</i>	Niangua Darter	Endangered	Threatened
<i>Etheostoma parvipinne</i>	Goldstripe Darter	Endangered	
<i>Etheostoma whipplei</i>	Redfin Darter	Endangered	
<i>Forbesichthys agassizi</i>	Spring Cavefish	Endangered	
<i>Hybognathus hayi</i>	Cypress Minnow	Endangered	
<i>Notropis maculatus</i>	Tailight Shiner	Endangered	
<i>Notropis sabinae</i>	Sabine Shiner	Endangered	
<i>Notropis topeka</i>	Topeka Shiner	Endangered	Endangered
<i>Noturus eleutherus</i>	Mountain Madtom	Endangered	
<i>Noturus placidus</i>	Neosho Madtom	Endangered	Threatened
<i>Percina nasuta</i>	Longnose Darter	Endangered	
<i>Platygobio gracilis</i>	Flathead Chub	Endangered	
<i>Scaphirhynchus albus</i>	Pallid Sturgeon	Endangered	Endangered
<i>Umbra limi</i>	Central Mudminnow	Endangered	

THREATENED AND ENDANGERED SPECIES IN MISSOURI (*Cont.*)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATE¹ STATUS</u>	<u>FEDERAL² STATUS</u>
AMPHIBIANS			
<i>Cryptobranchus a. alleganiensis</i>	Eastern Hellbender	Endangered	
<i>Cryptobranchus a. bishopi</i>	Ozark Hellbender	Endangered	Candidate
REPTILES			
<i>Deirochelys reticularia miaria</i>	Western Chicken Turtle	Endangered	
<i>Elaphe vulpina vulpina</i>	Western Fox Snake	Endangered	
<i>Emydoidea blandingii</i>	Blanding's Turtle	Endangered	
<i>Kinosternon f. flavescens</i>	Yellow Mud Turtle	Endangered	
<i>Kinosternon f. spooneri</i>	Illinois Mud Turtle	Endangered	
<i>Nerodia cyclopion</i>	Mississippi Green Water Snake ³	Endangered	
<i>Sistrurus c. catenatus</i>	Eastern Massasauga	Endangered	Candidate
BIRDS			
<i>Aimophila aestivalis</i>	Bachman's Sparrow	Endangered	
<i>Botaurus lentiginosus</i>	American Bittern	Endangered	
<i>Circus cyaneus</i>	Northern Harrier	Endangered	
<i>Egretta thula</i>	Snowy Egret	Endangered	
<i>Falco peregrinus</i>	Peregrine Falcon	Endangered	
<i>Limnothlypis swainsonii</i>	Swainson's Warbler	Endangered	
<i>Rallus elegans</i>	King Rail	Endangered	
<i>Sterna antillarum athalassos</i>	Interior Least Tern	Endangered	Endangered
<i>Tympanuchus cupido</i>	Greater Prairie-chicken	Endangered	
MAMMALS			
<i>Canus lupus</i>	Gray Wolf		Endangered
<i>Corynorhinus townsendii ingens</i>	Ozark Big-eared Bat ³	Endangered	Endangered
<i>Lepus californicus</i>	Black-tailed Jackrabbit	Endangered	
<i>Myotis grisescens</i>	Gray Bat	Endangered	Endangered
<i>Myotis sodalis</i>	Indiana Bat	Endangered	Endangered
<i>Spilogale putorius interrupta</i>	Plains Spotted Skunk	Endangered	

¹ Listed in the Wildlife Code of Missouri, Rule 3 CSR10-4, 111 Endangered Species.

²Federally Listed Species under the Endangered Species Act (ESA) of 1973 as Amended:

Endangered = Any species that is in danger of extinction throughout all or a significant portion of its range.

Threatened = Any species that is likely to become endangered within the foreseeable future.

Candidate = Plants or animals that the U.S. Fish & Wildlife Service is reviewing for possible addition to the list of Endangered and Threatened species.

Proposed = Any species proposed for listing as Threatened or Endangered by the U.S. Fish & Wildlife Service.

³Considered extirpated, historical or accidental occurrence in Missouri.

SPECIES AND STATUSES

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
LICHENS					
Cladonia cervicornis ssp. verticillata	A Lichen	S?	G5TNR		
Cladonia leporina	A Lichen	S2	G4G5		
Coenogonium missouriense	Missouri Cave Lichen	SH	GH		
Collema nigrescens	A Lichen	SU	G5?		
Dendroscopula intricatulum	A Lichen	S?	GUQ		
Dermatocarpon moulinsii	A Lichen	S1	GNR		
Dibaeis absoluta	A Lichen	S1	G4		
Flavoparmelia rutidota	A Lichen	S?	G4G5		
Graphina sophisticascens	A Lichen	SH	GNR		
Imshaugia aleurites	A Lichen	S?	G5		
Lecidea lurida	A Lichen	SU	GNR		
Pannaria rubiginosa	A Lichen	S1	G4G5		
Parmelia squarrosa	A Lichen	S?	G5		
Parmelina horrescens	A Lichen	S1	G5		
Parmotrema hypoleucinum	A Lichen	S1	G4G5		
Parmotrema madagascariaceum	A Lichen	S?	G3G5		
Parmotrema tinctorum	A Lichen	S2	G5?		
Pseudocyphellaria aurata	A Lichen	S1	G3G5		
Psora icterica	A Lichen	S1	G5?		
Pycnothelia papillaria	A Lichen	S1	G3G5		
Ramalina intermedia	A Lichen	S1	G4G5		
Rimelia subsidiosa	A Lichen	S1	G4G5		
Tuckermannopsis ciliaris	A Lichen	S?	G3G5		
Usnea angulata	A Lichen	S1	G3G5		
Xanthoparmelia australasica	A Lichen	S1	G5		
Total Lichen Records: 25					

LIVERWORTS AND HORNWORTS

Aneura maxima	A Liverwort	SU	G4?		
Aspiromitus punctatus ssp. agrestis	A Hornwort	S?	G5		
Bazzania trilobata	A Liverwort	S1	G5		
Kurzia setacea	A Liverwort	S1	G4G5		
Kurzia sylvatica	A Liverwort	S1	G5		
Marchantia aquatica	A Liverwort	SU	GNR		
Marsupella sphacelata	A Liverwort	S1	G5		
Metzgeria conjugata	A Liverwort	S1S2	G5		
Metzgeria furcata	A Liverwort	S?	G5		
Nardia lescurii	A Liverwort	S?	G3?		
Notothylas orbicularis	A Hornwort	S1	G5		
Nowellia curvifolia	A Liverwort	S?	G5		
Oxymitra incrassata	A Liverwort	S1	GNR		
Phaeoceros oreganus	A Hornwort	S1	GNRQ		
Preissia quadrata	A Liverwort	S?	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
LIVERWORTS AND HORNWORTS (<i>Cont.</i>)					
<i>Ptilidium pulcherrimum</i>	A Liverwort	S1	G5		
<i>Rectolejeunea maxonii</i>	A Liverwort	S1	G4		
<i>Riccardia multifida</i>	A Liverwort	S1	G5		
<i>Riccardia palmata</i>	A Liverwort	S1	G5		
<i>Riccia ozarkiana</i>	A Liverwort	SH	G1G2		
<i>Riccia sullivantii</i>	A Liverwort	S?	G4Q		
Total Liverwort and Hornwort Records: 21					
MOSSES					
<i>Acaulon muticum</i> var. <i>muticum</i>	A Moss	SU	G4G5TNR		
<i>Acaulon muticum</i> var. <i>rufescens</i>	A Moss	S?	G4G5T4		
<i>Anacamptodon splachnoides</i>	Knothole Moss	SU	G3G5		
<i>Anomobryum filiforme</i>	A Moss	S1	G4G5		
<i>Archidium alternifolium</i>	A Moss	S1	G4G5		
<i>Astomum phascoides</i>	A Pygmy Moss	SU	G3G4		
<i>Atrichum crispulum</i>	A Moss	SU	GNR		
<i>Atrichum cylindricum</i>	A Moss	SU	G5		
<i>Barbula convoluta</i> var. <i>convoluta</i>	A Moss	S?	G5TNR		
<i>Brachelyma subulatum</i>	A Moss	S1	G4G5		
<i>Brachythecium acutum</i>	A Moss	SU	GNRQ		
<i>Brachythecium campestre</i>	A Moss	SU	G4G5Q		
<i>Brachythecium digastrum</i>	A Moss	SU	G4?		
<i>Bruchia flexuosa</i>	A Moss	S?	G4		
<i>Bryhnia novae-angliae</i>	A Moss	SU	G5		
<i>Bryoxiphium norvegicum</i>	Sword Moss	S1	G5?		
<i>Bryum algovicum</i> var. <i>algovicum</i>	A Moss	S1	G4G5TNR		
<i>Bryum cyclophyllum</i>	A Moss	S?	G4G5		
<i>Bryum flaccidum</i>	A Moss	SU	G5		
<i>Bryum klinggraeffii</i>	A Moss	S?	G4G5		
<i>Bryum miniatum</i>	A Moss	S1	G3G4		
<i>Bryum pallescens</i>	A Moss	SU	G5		
<i>Bryum ruderales</i>	A Moss	SU	G3G5		
<i>Bryum subapiculatum</i>	A Moss	SX	G5?		
<i>Bryum uliginosum</i>	A Moss	S1	G3G5		
<i>Calliergonella cuspidata</i>	A Moss	S?	G5		
<i>Campylium polygamum</i>	A Moss	S1	G5		
<i>Campylium protensum</i>	A Moss	SU	G5T3T5		
<i>Campylium radicale</i>	A Moss	SU	G3G5		
<i>Campylopodia stenocarpa</i>	A Moss	S1	G5		
<i>Campylopus tallulensis</i>	A Moss	S1	G4		
<i>Dichelyma capillaceum</i>	A Moss	S1	G5		
<i>Dicranella rufescens</i>	A Moss	S1S2	G5?		
<i>Dicranum polysetum</i>	A Moss	S1	G5		
<i>Didymodon revolutus</i>	A Moss	S1	G4		
<i>Didymodon rigidulus</i> var. <i>rigidulus</i>	A Moss	S1	G5T4?		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
MOSSES (<i>Cont.</i>)					
Drepanocladus aduncus var. kneiffii	A Moss	SU	G5T4T5		
Encalypta procera	Extinguisher Moss	S1	G4G5		
Entodon brevisetus	A Moss	SU	G4?		
Ephemerum crassinervium var. texanum	A Moss	SU	G4T3?		
Ephemerum serratum	A Moss	SU	G4		
Fissidens exilis	Small Pocket Moss	SU	G3G4		
Fontinalis novae-angliae	A Moss	SU	G5		
Forsstroemia producta	A Moss	S1	G5?		
Funaria americana	A Moss	SU	G3?		
Funaria calvescens	A Moss	SU	G5		
Grimmia olneyi	A Moss	S?	G3G5		
Grimmia ovalis	A Moss	SU	G5?		
Grimmia plagiopodia	A Moss	SU	G4G5		
Gymnostomum calcareum	A Moss	SU	G5?		
Herzogiella striatella	A Moss	SU	G4G5		
Homaliadelphus sharpii	Sharp's Homaliadelphus	S1	G3?		
Hypnum cupressiforme var. filiforme	A Moss	S1	G5TNR		
Hypnum pallescens	A Moss	S1	G5		
Hypnum pratense	A Moss	SU	G5		
Isopterygiopsis muelleriana	A Moss	S1	G5		
Jaffueliobryum rauai	A Moss	SU	G4?		
Jaffueliobryum wrightii	A Moss	SU	G4G5		
Leskea polycarpa	A Moss	SU	G4G5		
Leucodon brachypus	A Moss	SU	G5		
Micromitrium megalosporum	A Moss	S1S2	G4		
Micromitrium synoicum	A Moss	SU	G4		
Micromitrium tenerum	A Moss	SU	G4G5		
Mnium hornum	A Moss	SU	G5		
Mnium thomsonii	A Moss	S?	G5		
Myurella sibirica	A Moss	S?	G4?		
Neckera bessi	A Moss	S1	G4G5		
Orthotrichum anomalum	A Moss	S?	G4G5		
Orthotrichum diaphanum	A Moss	S?	G5		
Orthotrichum elegans	A Moss	S1	G5		
Orthotrichum lescurii	A Moss	SU	GNR		
Physcomitrium collenchymatum	A Moss	S1	G2G4		
Physcomitrium hookeri	A Moss	SU	G2G4		
Plagiomnium medium	A Moss	SU	G5		
Plagiothecium denticulatum	A Moss	S1	G5		
Platylomella lescurii	A Moss	S?	G5		
Pleuridium acuminatum	A Moss	SU	G3G5		
Pleuridium sullivantii	A Moss	SU	G3G5		
Pseudotaxiphyllum distichaceum	A Moss	SU	G4G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
MOSSES (<i>Cont.</i>)					
<i>Ptychomitrium serratum</i>	A Moss	SU	G4?		
<i>Ptychomitrium sinense</i>	A Moss	S1	G4G5		
<i>Pylaisia intricata</i>	A Moss	SU	G4		
<i>Pylaisiadelphina tenuirostris</i>	A Moss	SU	G5?		
<i>Pyramidula tetragona</i>	A Moss	SU	G3G5		
<i>Rhabdoweisia crispata</i>	A Moss	S1	G5		
<i>Rhytidium rugosum</i>	Golden Glade-moss	S1	G5		
<i>Schistidium liliputanum</i>	A Moss	SU	GNR		
<i>Seligeria calcarea</i>	A Moss	S?	G4?		
<i>Seligeria donniana</i>	A Moss	S1	G4G5		
<i>Seligeria pusilla</i>	A Moss	S1	G3G5		
<i>Sematophyllum marylandicum</i>	A Moss	S1	G5		
<i>Sphagnum affine</i>	Sphagnum	S1	G5		
<i>Sphagnum angustifolium</i>	Narrowleaf Peatmoss	S1	G5		
<i>Sphagnum bartlettianum</i>	Sphagnum	SU	G4G5		
<i>Sphagnum capillifolium</i>	Northern Peatmoss	S1	G5		
<i>Sphagnum cuspidatum</i>	Sphagnum	SU	G5		
<i>Sphagnum fallax</i>	Sphagnum	SU	G5		
<i>Sphagnum fimbriatum</i> var. <i>fimbriatum</i>	Sphagnum	S1	G5TNR		
<i>Sphagnum henryense</i>	Sphagnum	S1	G4?		
<i>Sphagnum inundatum</i>	Sphagnum	S1	G4		
<i>Sphagnum magellanicum</i>	Magellan's Peatmoss	SU	G5		
<i>Sphagnum platyphyllum</i>	Sphagnum	SU	G5		
<i>Sphagnum recurvum</i>	Sphagnum	S1	G5		
<i>Sphagnum russowii</i>	Sphagnum	SU	G5		
<i>Sphagnum subtile</i>	Sphagnum	SU	G5?Q		
<i>Sphagnum trinitense</i>	Sphagnum	S1	G4		
<i>Syntrichia papillosa</i>	A Moss	S?	G5		
<i>Syrrhopodon texanus</i>	A Moss	S1	G5		
<i>Thamnobryum alleghaniense</i>	A Moss	S1	G5?		
<i>Tortella fragilis</i>	Fragmented Screw-moss	SU	G5		
<i>Tortella tortuosa</i>	Twisted Moss	SU	G5		
<i>Trematodon longicollis</i>	A Moss	S1	G5		
<i>Trichostomum tenuirostre</i> var. <i>gemmae</i>	A Moss	SU	G4TNR		
<i>Zygodon apiculatus</i>	A Moss	S1	GU		
Total Moss Records: 114					
FERNS AND FERN ALLIES					
<i>Asplenium montanum</i>	Mountain Spleenwort	SH	G5		
<i>Azolla caroliniana</i>	Eastern Mosquito Fern	S1S3	G5		
<i>Botrychium biternatum</i>	Few-lobed Grape Fern	S1	G5		
<i>Cheilanthes alabamensis</i>	Alabama Lip-fern	S1	G4G5		
<i>Cheilanthes tomentosa</i>	Woolly Lip-fern	S1	G5		
<i>Cystopteris tenuis</i>	A Bladderfern	S1	G4G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
FERNS AND FERN ALLIES (Cont.)					
Dennstaedtia punctilobula	Hay-scented Fern	S2	G5		
Dryopteris carthusiana	Spinulose Shield Fern	S2	G5		
Dryopteris celsa	Log Fern	S1	G4		
Dryopteris cristata	Crested Fern	S1	G5		
Dryopteris goldiana	Goldie's Fern	S2	G4		
Dryopteris intermedia	Evergreen Woodfern	S1	G5		
Huperzia porophila	Fir Clubmoss	S2	G4		
Isoetes engelmannii var. engelmannii	Engelmann's Quillwort	S1?	G4TNR		
Lycopodium dendroideum	Round-branched Ground Pine	S1	G5		
Lycopodium digitatum	A Clubmoss	S2	G5		
Lycopodium tristachyum	Ground Cedar	S1	G5		
Matteuccia struthiopteris var. pensylvanica	Ostrich Fern	S2	G5T5		
Ophioglossum crotalophoroides	Bulbous Adder's-tongue	SH	G5		
Ophioglossum petiolatum	Stalked Adder's-tongue	SX	G5		
Pellaea glabella var. missouriensis	Missouri Cliffbrake	S1S2	G5T1T2		
Pilularia americana	American Pillwort	SU	G5		
Woodsia obtusa ssp. occidentalis	Blunt-lobed Woodsia	S1	G5T3T4		
Woodwardia areolata	Netted Chain Fern	S2	G5		
Total Ferns and Fern Allies Records: 24					

FLOWERING PLANTS

Acalypha deamii	Large Seeded Mercury	S1	G4?		
Aconitum uncinatum	Southern Monkshood	S1	G4		
Agalinis auriculata	Auriculate False Foxglove	S3	G3		
Agalinis heterophylla	Prairie False Foxglove	S1	G4G5		
Agalinis purpurea	Purple False Foxglove	S2	G5		
Agalinis viridis	Green False Foxglove	S1	G4?		
Agastache scrophulariifolia	Purple Giant-hyssop	S1	G4		
Agrimonia gryposepala	Tall Agrimony	SU	G5		
Allium burdickii	Wild Leek	S2	G4G5		
Alopecurus aequalis	Floating Foxtail Grass	S2	G5		
Amsonia ciliata var. filifolia	Ciliate Blue Star	S2S3	G5?T4?		
Anemone cylindrica	Thimbleweed	S2	G5		
Anemone quinquefolia	Wood Anemone	S1	G5		
Aralia nudicaulis	Wild Sarsaparilla	S2	G5		
Aristida adscensionis	Sixweeks Three-awn	SH	G5		
Aristida desmantha	Curly Three-awn	S1	G5		
Aristida lanosa	Woollyleaf Three-awn	S1	G5		
Aristida ramosissima	Slender Three-awn	SH	G5		
Aronia melanocarpa	Black Chokeberry	S1	G5		
Artemisia dracunculus	A Wormwood	SH	G5		
Asclepias meadii	Mead's Milkweed	S2	G2	E	T
Asclepias speciosa	Showy Milkweed	SA	G5		
Astragalus lotiflorus	Low Milk Vetch	S2	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
FLOWERING PLANTS (Cont.)					
Astranthium ciliatum	Western Daisy	S2	G5T5		
Bartonia paniculata ssp. paniculata	Screwstem	S1	G5T5		
Bartonia virginica	Yellow Bartonia	S1	G5		
Berberis canadensis	American Barberry	S2	G3		
Bergia texana	Bergia	S2	G5		
Berula erecta var. incisum	Cut-leaved Water-parsnip	S1	G4G5T4T5		
Bidens laevis	A Beggar's Tick	S1	G5		
Bolboschoenus maritimus ssp. paludosus	Bayonet Grass	S1	G5T5		
Boltonia decurrens	Decurrent False Aster	S1	G2	E	T
Bouteloua gracilis	Blue Grama	S1	G5		
Bouteloua hirsuta var. hirsuta	Hairy Grama	S2	G5T5		
Bromus latiglumis	A Brome	S3	G5		
Buchloe dactyloides	Buffalo Grass	SH	G4G5		
Calamagrostis porteri ssp. insperata	Oferhollow Reed Grass	S3	G4T3		
Calamagrostis stricta ssp. inexpansa	Northern Reedgrass	S2S3	G5T5		
Calamovilfa longifolia var. longifolia	Long-leaved Reed Grass	SH	G5T5		
Callicarpa americana	French Mulberry	S1	G5		
Callirhoe bushii	Bush's Poppy Mallow	S2	G3		
Callirhoe triangulata	Clustered Poppy Mallow	SH	G3		
Calopogon tuberosus	Grass Pink Orchid	S2	G5		
Caltha palustris var. palustris	Marsh Marigold	S1	G5T5		
Camassia angusta	A Wild Hyacinth	S3	G5?Q		
Campanula aparinoides var. aparinoides	Marsh Bellflower	S1	G5TNR		
Campanula rotundifolia	Harebell	S1	G5		
Carex abscondita	A Sedge	S1	G4G5		
Carex alata	Broadwing Sedge	S2S3	G5		
Carex albicans var. australis	Bellow Beaked Sedge	S1	G5T5		
Carex albolutescens	Greenish-white Sedge	S1S2	G5		
Carex aquatilis var. substricta	A Sedge	S1	G5TNR		
Carex arkansana	A Sedge	S3	G4		
Carex atherodes	Awned Sedge	S1	G5		
Carex atlantica ssp. atlantica	A Sedge	S1	G5T4		
Carex bromoides ssp. bromoides	A Sedge	S2	G5T5		
Carex buxbaumii	Brown Bog Sedge	S2	G5		
Carex cherokeensis	Cherokee Sedge	S2	G4G5		
Carex communis var. communis	Fibrous-root Sedge	S2	G5T5		
Carex comosa	Bristly Sedge	S2	G5		
Carex conoidea	Field Sedge	S1	G5		
Carex cumberlandensis	A Sedge	S1	GNR		
Carex debilis var. debilis	White-edge Sedge	S1	G5T5		
Carex decomposita	Epiphytic Sedge	S3	G3		
Carex fissa var. fissa	A Sedge	S1	G4?T3T4		
Carex flaccosperma	A Sedge	S2	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
FLOWERING PLANTS (Cont.)					
Carex gigantea	Giant Sedge	S1S2	G4		
Carex gracillima	Graceful Sedge	S1	G5		
Carex jorii	Cypress-swamp Sedge	SH	G4G5		
Carex lacustris	Lake-bank Sedge	S2	G5		
Carex laxiculmis	Spreading Sedge	S2	G5		
Carex laxiflora var. laxiflora	A Carex	S1	G5T5		
Carex longii	Greenish-white Sedge	S1	G5		
Carex microdonta	A Sedge	S1	G4		
Carex molestiformis	A Sedge	S2	G4		
Carex nigromarginata var. floridana	A Sedge	S1	G5T5?		
Carex oxylepis	Sharp-scale Sedge	S2	G5?		
Carex prasina	Drooping Sedge	S1	G4		
Carex reniformis	Reniform Sedge	S1	G4?		
Carex reznicekii	A Sedge	S2?	G5		
Carex sartwellii	Sartwell's Sedge	S1	G4G5		
Carex scabrata	Rough Sedge	SH	G5		
Carex socialis	A Sedge	S2	G4		
Carex sprengei	Longbeak Sedge	S1	G5?		
Carex sterilis	A Sedge	S2	G4		
Carex straminea	Straw Sedge	S1	G5		
Carex stricta	Tussock Sedge	S3	G5		
Carex sychnocephala	A Sedge	S1	G4		
Carex tenera var. echinodes	A Sedge	SH	G5TNRQ		
Carex tetanica	Rigid Sedge	S3	G4G5		
Carex timida	Timid Sedge	S1S2	G2G3		
Carex tonsa var. rugosperma	Shaved Sedge	S1	G5T5		
Carex tonsa var. tonsa	Shaved Sedge	SH	G5T4T5		
Carex triangularis	Triangular Sedge	S2	G5		
Carex trichocarpa	Hairy-fruited Sedge	S1	G4		
Carex vesicaria var. monile	A Sedge	S2?	G5T4		
Carex willdenowii	Willdenow's Sedge	S1	G5		
Carya pallida	Sand Hickory	S2S3	G5		
Castanea pumila var. ozarkensis	Ozark Chinquapin	S2	G5T3		
Castilleja purpurea var. purpurea	Purple Paintbrush	SH	G5T4?		
Castilleja sessiliflora	Downy Painted Cup	S2	G5		
Cayaponia quinqueloba	A Gourd	S1	G4		
Centaurea americana	American basket flower	SH	G5		
Centrosema virginianum	Coastal Butterfly-pea	SH	G5		
Ceratophyllum echinatum	Coontail	S1?	G4?		
Chaetopappa asteroides var. asteroides	Common Leastdaisy	S2S3	G5T3T5		
Chasmanthium laxum ssp. laxum	Slender Spike Grass	S1	G5T5		
Chasmanthium laxum ssp. sessiliflorum	A Spike Grass	SH	G5T5		
Chelone obliqua	Rose Turtlehead	S2	G4		

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FLOWERING PLANTS (Cont.)					
<i>Chenopodium strictum</i> var. <i>glaucophyllum</i>	A Goosefoot	SH	G5TU		
<i>Cirsium undulatum</i>	Wavy-leaved Thistle	SH	G5		
<i>Cissus trifoliata</i>	Marine Vine	S2	G5		
<i>Claytonia ozarkensis</i>	Ozark Spring Beauty	SU	G1G3Q		
<i>Clematis fremontii</i>	Fremont's Leather Flower	S3	G5		
<i>Clematis viorna</i>	A Leatherflower	S1	G5		
<i>Cleome serrulata</i>	Rock Mountain Bee Plant	SH	G5		
<i>Coeloglossum viride</i> var. <i>virescens</i>	Long-bracted Orchid	S1	G5T5		
<i>Coelorachis cylindrica</i>	Joint Grass	S1	G4G5		
<i>Conyza canadensis</i> var. <i>pusilla</i>	Fleabane	S1S2	G5T5		
<i>Corispermum pallasii</i>	A Bugseed	SH	G4?		
<i>Corispermum villosum</i>	Oriental Tick-seed	SU	G4?		
<i>Corydalis micrantha</i> ssp. <i>australis</i>	A Corydalis	S2	G5T5?		
<i>Crataegus marshallii</i>	Parsley Haw	S1	G5		
<i>Crataegus spathulata</i>	A Hawthorn	S1	G5		
<i>Croton michauxii</i>	Narrowleaf Rushfoil	S1	G5		
<i>Cyclachaena xanthifolia</i>	A Marsh Elder	S1	G5		
<i>Cynosciadium digitatum</i>	Finger Dog-shade	S2	G4G5		
<i>Cyperus compressus</i>	Coco Grass	SU	G5		
<i>Cyperus croceus</i>	Baldwin's Cyperus	S1	G5		
<i>Cyperus diandrus</i>	Umbrella Flatsedge	S1	G5		
<i>Cyperus flavicomus</i>	An Umbrella Sedge	S1	G5		
<i>Cyperus grayoides</i>	An Umbrella Sedge	S3	G3		
<i>Cyperus hystricinus</i>	Flatsedge	S1	G4		
<i>Cyperus plukenetii</i>	Plukenet's Cyperus	S1	G5		
<i>Cyperus polystachyos</i> var. <i>texensis</i>	Many-spiked Cyperus	S2S3	G5T5		
<i>Cyperus retroflexus</i>	Umbrella Sedge	S1	G5		
<i>Cyperus retrofractus</i>	Teasel-like Cyperus	S1S2	G5		
<i>Cyperus retrorsus</i>	An umbrella sedge	SH	G5		
<i>Cyperus schweinitzii</i>	Schweinitz's Flatsedge	S3	G5		
<i>Cyperus setigerus</i>	Bristled Cyperus	S1	G3G5		
<i>Cypripedium candidum</i>	Small White Lady-slipper	S1	G4		
<i>Cypripedium reginae</i>	Showy Lady-slipper	S2S3	G4		
<i>Dalea enneandra</i>	Nine-anther Dalea	S2	G5		
<i>Dalea gattereri</i>	Gatterer Prairie-clover	S1	G3G4		
<i>Dalea multiflora</i>	Round-headed Prairie Clover	SH	G5		
<i>Decodon verticillatus</i>	Swamp Loosestrife	S1	G5		
<i>Delphinium exaltatum</i>	Tall Larkspur	S2	G3		
<i>Descurainia pinnata</i> ssp. <i>pinnata</i>	Tansy Mustard	S2S3	G5T5		
<i>Desmodium ochroleucum</i>	Creamflower Tick Trefoil	SH	G1G2		
<i>Desmodium strictum</i>	Pineland Tick Trefoil	S1	G4		
<i>Desmodium viridiflorum</i>	Velvety Tick Trefoil	S1	G5?		
<i>Diarrhena americana</i>	American Beakgrass	S1	G4G5		
<i>Dichondra carolinensis</i>	Pony-foot Grass	S1	G5		
<i>Distichlis spicata</i> var. <i>spicata</i>	Seashore Salt Grass	S1	G5TNR		

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Dodecatheon amethystinum	Amethyst Shooting Star	S2	G4		
Dodecatheon frenchii	French's Shooting Star	S1	G3		
Doellingeria umbellata var. pubens	Flat-topped White Aster	S1	G5T5		
Echinacea angustifolia	Narrow-leaved Coneflower	SH	G4		
Echinochloa walteri	A Barnyard Grass	S1	G5		
Echinodorus tenellus var. parvulus	Dwarf Burhead	S1	G3T3		
Elatine triandra	Waterwort	SH	G5		
Eleocharis atropurpurea	A Spike Rush	S1	G4G5		
Eleocharis equisetoides	Horsetail Spike Rush	SH	G4		
Eleocharis lanceolata	Lance-like Spike Rush	S1	G4G5		
Elodea canadensis	Broad Waterweed	SU	G5		
Elymus diversiglumis	Wild Rye	SH	G3G4Q		
Epifagus virginiana	Beech Drops	S2	G5		
Epilobium leptophyllum	Willow Herb	S1	G5		
Eragrostis glomerata	A Love Grass	S1	G3G5		
Eragrostis reptans	Creeping Love Grass	SH	G5		
Erianthus giganteus	Plume Grass	S1	G5		
Erianthus strictus	Narrow Plumegrass	SH	G5		
Eriogonum longifolium var. longifolium	Umbrella Plant	S2	G4T4		
Erysimum capitatum var. capitatum	Western Wallflower	S3?	G5T5		
Euonymus americanus	Strawberry Bush	S2	G5		
Eupatorium maculatum var. bruneri	Spotted Joe-pye Weed	S1	G5T4T5Q		
Eupatorium rotundifolium var. scabridum	A Thoroughwort	S1?	G5T3T5		
Eupatorium semiserratum	A Thoroughwort	S1S2	G5		
Euphorbia geyeri var. geyeri	Geyer's Spurge	S1	G5T5		
Eurybia furcata	Forked Aster	S2	G3		
Eurybia macrophylla	Big-leaved Aster	S2	G5		
Festuca sororia	A Fescue	SH	G4		
Filipendula rubra	Queen of the Prairie	S2	G4G5		
Fimbristylis littoralis var. littoralis	A Fimbristylis	S1?	G3G5TNR		
Floerkea proserpinacoides	False Mermaid	SU	G5		
Fragaria vesca var. americana	Woodland Strawberry	S1	G5T5		
Fuirena simplex var. aristulata	An Umbrella Grass	S2?	G5T4		
Gaillardia aestivalis var. flavovirens	A Blanket Flower	SH	G5T3T5		
Galium boreale ssp. septentrionale	Northern Bedstraw	S2	G5TNR		
Gaura coccinea	Scarlet Gaura	S1	G5		
Gaylussacia baccata	Black Huckleberry	S1	G5		
Gentiana andrewsii var. andrewsii	Closed Gentian	S1	G5?T5?		
Geocarpon minimum	Geocarpon	S2	G2	E	T
Geum virginianum	Pale Avens	S1	G5		
Gillenia trifoliata	Indian Physic	SH	G4G5		
Glyceria acutiflora	Sharp-scaled Manna Grass	S3	G5		
Glyceria septentrionalis var. arkansana	Eastern Manna Grass	SU	G5		

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Glycyrrhiza lepidota var. lepidota	Wild Licorice	S1	G5TNRQ		
Gratiola viscidula ssp. viscidula	Hedge Hyssop	S1	G4G5TNR		
Grindelia ciliata	A Goldenweed	S1	G4G5		
Hedyotis boscii	A Bluet	S1	G5		
Hedyotis uniflora	Clustered Bluets	S1	G5		
Helenium virginicum	Virginia Sneezeweed	S3	G3	E	T
Helianthemum canadense	A Rockrose	SU	G5		
Helianthus angustifolius	Swamp Sunflower	S2	G5		
Heliotropium curassavicum var. curassavicum	Seaside Heliotrope	S1	G5T5		
Heterotheca canescens	Hoary Golden Aster	SH	G5?		
Heuchera parviflora var. parviflora	Little Leaved Alum Root	S1	G4T4		
Hottonia inflata	Featherfoil	S2	G4		
Hydrocotyle ranunculoides	Floating Pennywort	S1S2	G5		
Hydrocotyle verticillata	Water Pennywort	S1	G5		
Hydrolea ovata	Ovate Fiddleleaf	S2	G5		
Hypericum adpressum	Creeping St. John's-wort	S1	G3		
Hypericum ascyron ssp. pyramidatum	Great St. John's-wort	S1	G4		
Hypericum lobocarpum	A St. John's Wort	S1	G4Q		
Hypericum majus	Greater St. John's-wort	SH	G5		
Ilex verticillata var. padifolia	Winterberry	S3	G5TNR		
Isolepis molesta	Gulf Coast Bulrush	SH	G4?		
Isotria medeoloides	Small Whorled Pogonia	SH	G2	E	T
Isotria verticillata	Large Whorled Pogonia	S1S2	G5		
Juncus alpinoarticulatus	Richardson Rush	SH	G5		
Juncus balticus var. littoralis	Baltic Rush	S1	G5T5		
Juncus brachyphyllus	Small-headed Rush	SH	G5		
Juncus bufonius var. bufonius	Toad Rush	S1	G5T5		
Juncus canadensis var. canadensis	Canada Rush	S1	G5T5		
Juncus debilis	Weak Rush	S1	G5		
Juncus nodosus	Knotted Rush	SH	G5		
Juncus validus	A Rush	S1	G5		
Justicia ovata var. lanceolata	A Water Willow	S2	G5T4T5		
Lactuca hirsuta	Hairy Lettuce	SU	G5?		
Lactuca ludoviciana	Western Lettuce	SH	G4G5		
Lactuca tatarica ssp. pulchella	Blue Lettuce	S1	G5T5		
Lathyrus pusillus	A Wild Pea	SH	G5?		
Lechea racemulosa	Illinois Pinweed	SH	G5		
Leitneria floridana	Corkwood	S2	G3		
Lemna obscura	A Duckweed	SU	G5		
Lemna trisulca	Star Duckweed	S2	G5		
Lemna turionifera	A Duckweed	SH	G5		
Liatis punctata var. punctata	A Blazing Star	S3	G5T5		
Liatis scariosa var. nieuwlandii	A Blazing Star	S2	G5?T3T5		
Liatis spicata	Button Snakeroot	SX	G5		

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Lilium philadelphicum var. andinum	Wood Lily	S1	G5T4T5		
Lilium superbum	Turk's Cap Lily	S1	G5		
Limnobium spongia ssp. spongia	American Frogbit	S2	G4		
Limnoscium pinnatum	Pinnate Dogshade	S1	G5?		
Limosella aquatica	Mudwort	SH	G5		
Lindera melissifolia	Pondberry	S1	G2G3	E	E
Liparis loeselii	Loesel's Twayblade	S2	G5		
Lipocarpa aristulata	Lipocarpa	SH	G5?		
Lipocarpa drummondii	A Lipocarpa	SH	G4G5		
Listera australis	Southern Twayblade	S1	G4		
Lithospermum latifolium	American Gromwell	S2	G4		
Lobelia puberula	Downy Lobelia	SH	G5		
Lomatium foeniculaceum ssp. foeniculaceum	Hairy Parsley	S1S3	G5T5		
Ludwigia leptocarpa	Primrose Willow	S2	G5		
Ludwigia microcarpa	A False Loosestrife	S2	G5		
Ludwigia repens	A False Loosestrife	SU	G5		
Lycopus asper	Bugle Weed	SH	G5		
Lycopus uniflorus	Northern Bugleweed	S2?	G5		
Lygodesmia juncea	Skeleton Plant	S3	G5		
Lyonia mariana	Stagger Bush	SH	G5		
Lysimachia terrestris	Swamp Candle	S1	G5		
Lysimachia thyrsiflora	Tufted Loosestrife	S1	G5		
Malus angustifolia	Narrow-leaved Wild Crab	S2	G5?		
Malvastrum hispidum	Yellow False Mallow	S3	G3G5		
Marshallia caespitosa var. caespitosa	Barbara's Buttons	S3	G4T4		
Marshallia caespitosa var. signata	Barbara's Buttons	S1	G4T4		
Mecardonia acuminata	Water Hyssop	S1	G5		
Medeola virginiana	Indian Cucumber-root	SH	G5		
Melica mutica	Two-flowered Melic Grass	S1	G5		
Menyanthes trifoliata	Bogbean	S1	G5		
Mimulus glabratus var. jamesii	Roundleaf Monkey Flower	SH	G5T5		
Minuartia muscorum	Dixie Stitchwort	S1	GNR		
Mitreola petiolata	Miterwort	S1	G5		
Moehringia lateriflora	Grove Sandwort	S2S3	G5		
Monarda clinopodia	A Horsemint	SH	G5		
Monarda punctata var. arkansana	Arkansas Bee Balm	SA	G5TNR		
Monarda punctata var. occidentalis	Dotted Monarda	SA	G5T4T5		
Monarda punctata var. villicaulis	Horsemint	S3	G5T5?		
Muhlenbergia asperifolia	Scratchgrass	S1	G5		
Najas flexilis	A Naiad	SH	G5		
Najas gracillima	Thread-like Naiad	S2	G5?		
Nemastylis geminiflora	Prairie Iris	S2	G4		
Neviusia alabamensis	Snow Wreath	SH	G2		

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Nothocalais cuspidata	Prairie Dandelion	S2	G5		
Nyssa biflora	Swamp Black Gum	SH	G5		
Obolaria virginica	Virginia Pennywort	S2	G5		
Oenothera clelandii	Evening Primrose	S2	G3G5		
Oenothera fruticosa ssp. fruticosa	Shrubby Sundrops	S1	G5T5		
Oenothera fruticosa ssp. glauca	Shrubby Sundrops	SH	G5T5		
Oenothera nutans	Nodding Evening Primrose	S1S2	G4		
Oenothera perennis	Small Sundrops	S1	G5		
Oenothera rhombipetala	An Evening Primrose	SH	G4G5		
Oenothera triloba	Stemless Evening Primrose	S2	G4		
Opuntia macrorhiza	Low Prickly Pear	S2	G5		
Opuntia polyacantha var. polyacantha	Starvation Cactus	SX	G5T5		
Orobanche ludoviciana	A Broomrape	S1	G5		
Orobanche multiflora	A Broomrape	S1	G5		
Oryzopsis racemosa	Black-seeded Mountain Rice	S1	G5		
Oxytropis lambertii var. lambertii	Locoweed	S2	G5TNR		
Packera tomentosa	Hairy Groundsel	SH	G4G5		
Panicum dichotomum var. mattamuskeetense	A Panic Grass	SH	G4T4?		
Panicum dichotomum var. nitidum	A Panic Grass	S1	G5TNR		
Panicum dichotomum var. yadkinense	A Panic Grass	S1	G5T4Q		
Panicum hians	Gaping Panic Grass	S3	G5		
Panicum leibergii	A Panic Grass	SU	G5		
Panicum portoricense	A Panic Grass	S1?	G5T5		
Panicum verrucosum	Warty Panicgrass	S1	G4		
Paronychia virginica	Virginia Whitlow Wort	S1	G4		
Paspalum bifidum	Pitchfork Paspalum	S1	G5		
Paspalum dissectum	Mudbank Paspalum	SH	G4?		
Paspalum setaceum var. setaceum	Slender Paspalum	S1	G5T5		
Pedimelum argophyllum	Silvery Psoralea	S2	G5		
Peltandra virginica ssp. virginica	Arrow Arum	S2	G5T5		
Penstemon cobaea var. cobaea	A Beard-tongue	S1	G4TNR		
Penstemon grandiflorus	Large Beard-tongue	S1	G5?		
Perideridia americana	Eastern Eulophus	SU	G4		
Phacelia covillei	Coville's Phacelia	S1	G3		
Philadelphus pubescens var. verrucosus	Mock Orange	S1	G5?TU		
Phlox amplifolia	Large-leaved Phlox	S3?	G3G5		
Phlox bifida ssp. stellaria	Bifid Phlox	S1	G5?T3		
Phlox carolina ssp. angusta	Carolina Phlox	SH	G5?TNR		
Phlox carolina ssp. carolina	Carolina Phlox	S1	G5?T3T5Q		
Phlox maculata ssp. pyramidalis	Wild Sweet William	S2	G5T4T5		
Phyla nodiflora var. incisa	Fog Fruit	SH	G5TU		
Phyllanthus polygonoides	Knotweed Leaf-flower	S1	G5		
Physaria filiformis	Missouri Bladder-pod	S3	G3	E	T

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Physostegia intermedia	A False Dragonhead	S1	G5		
Plantago patagonica	Woolly Plantain	S2	G5		
Platanthera ciliaris	Yellow-fringed Orchid	S1	G5		
Platanthera clavellata	Green Wood Orchid	S2	G5		
Platanthera flava var. flava	Pale Green Orchid	S2	G4T4?Q		
Platanthera flava var. herbiola	Northern Rein Orchid	S2	G4T4Q		
Platanthera leucophaea	Eastern Prairie Fringed Orchid	S1	G3	E	T
Platanthera praeclara	Western Prairie Fringed Orchid	S1	G3	E	T
Platanthera psycodes	Small Purple-fringed Orchid	SX	G5		
Pluchea foetida var. foetida	March Fleabane	SH	G5T5		
Poa interior	Inland Bluegrass	S1	G5		
Pogonia ophioglossoides	Snake-mouth Orchid	S1	G5		
Polygonella americana	Jointweed	S2	G5		
Polygonum amphibium var. stipulaceum	Water Smartweed	S1	G5T5		
Polygonum arifolium	Halberd-leaved Tear Thumb	S1	G5		
Polygonum densiflorum	Dense-flower Smartweed	S1S2	G5		
Polygonum punctatum var. majus	Dotted Smartweed	SU	G4G5		
Polymnia laevigata	Smooth Leaf-cup	SX	G3		
Polypremum procumbens	Juniper-leaf	S2	G5		
Populus grandidentata	Big-toothed Aspen	S1	G5		
Populus tremuloides	Quaking Aspen	S2	G5		
Potamogeton epihydrus	Nuttall Pondweed	SH	G5		
Potamogeton pulcher	Spotted Pondweed	S2S3	G5		
Potamogeton pusillus var. pusillus	Slender Pondweed	S1	G5T5		
Potentilla nicolletii	Bushy Cinquefoil	SH	GNR		
Prenanthes racemosa	Rattlesnake Root	SH	G5		
Ptilimnium capillaceum	Mock Bishop's Weed	SH	G5		
Pycnanthemum muticum	Blunt Mountain Mint	S2	G5		
Pycnanthemum torrei	Torrey Mountain Mint	SH	G2		
Quercus ellipsoidal	Northern Pin Oak	S1	G5		
Quercus nigra	Water Oak	S2	G5		
Quercus prinoides	Dwarf Chinquapin Oak	S3?	G5		
Quercus stellata var. margaretta	Sand Post Oak	SH	G5		
Quercus texana	Nuttall's Oak	S2	G4G5		
Ranunculus cymbalaria	Seaside Crowfoot	SH	G5		
Rhynchosia difformis	Double-formed Snoutbean	S1	G5?		
Rhynchospora harveyi	Harvey's Beak-rush	S1	G4		
Rhynchospora macrostachya var. macrostachya	Horned Rush	S1	G4T4		
Ribes americanum	Gooseberry	S1	G5		
Rorippa aquatica	Lake Cress	S2	G4?		
Rosa blanda	Smooth Rose	S1	G5		
Rosa virginiana	A Rose	SU	G5		
Rubus missouricus	Prickly Groundberry	SH	GHQ		

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Rudbeckia amplexicaulis	Clasping Leaved Coneflower	S?	G5		
Rudbeckia grandiflora var. grandiflora	Rough Coneflower	S1	G5T4?		
Ruppia maritima	Ditch Grass	S1	G5		
Sabatia brachiata	Marsh Pink	S1	G5?		
Sacciolepis striata	American Cupscale	S1	G5		
Sagittaria ambigua	Kansas Arrowhead	S1	G2?		
Sagittaria platyphylla	Ovate-leaved Arrowhead	S1	G5		
Salix discolor	Pussy Willow	S1	G5		
Salix eriocephala var. famelica	Diamond Willow	SU	G5TNR		
Salix petiolaris	Meadow Willow	S1	G5		
Sambucus pubens	Red-berried Elderberry	S1	G4G5Q		
Sanicula smallii	Black Snakeroot	SH	G5		
Sapindus drummondii	Soapberry	S2	G5T5		
Schoenoplectus americanus	Olney's Bulrush	SH	G5		
Schoenoplectus californicus	Giant Bulrush	S1	G5		
Schoenoplectus deltarum	Delta Bulrush	SH	G3G4		
Schoenoplectus etuberculatus	Canby's Bulrush	S1	G3G4		
Schoenoplectus hallii	Hall's Bulrush	S2	G2G3		
Schoenoplectus purshianus	Weakstalk Bulrush	S1	G4G5		
Schoenoplectus saximontanus	A Bulrush	S1	G5		
Schoenoplectus subterminalis	Swaying Rush	S1	G4G5		
Schoenoplectus torreyi	Torrey's Bulrush	SH	G5?		
Scirpus divaricatus	A Bulrush	SH	G5		
Scirpus pallidus	Pale Bulrush	S2	G5		
Scirpus pedicellatus	A Bulrush	SH	G4		
Scleria reticularis var. pubescens	Muhlenberg's Nut-rush	S1	G5		
Scrophularia lanceolata	Early Figwort	SH	G5		
Scutellaria elliptica var. hirsuta	Hairy Skullcap	SH	G5T5		
Scutellaria galericulata	Marsh Skullcap	S1	G5		
Sida elliottii	Elliott Sida	S1	G4G5		
Sisyrinchium atlanticum	Eastern Blue-eyed Grass	S2	G5		
Smilax illinoensis	Carrion Flower	S2S3	G4?		
Solidago riddellii	Riddell's Goldenrod	S3	G5		
Spermolepis divaricata	Rough-fruit Spermolepis	S1	G5		
Sphenopholis pensylvanica	Swamp Oats	SH	G4		
Spiraea alba var. alba	Meadow-sweet	S1	G5T5		
Spiraea tomentosa	Hardhack	S1	G5		
Sporobolus airoides	Alkali Sacaton	SH	G5		
Stachys aspera	Hedge Nettle	SH	G4?		
Stenosiphon linifolius	Stenosiphon	S2	G5		
Stylisma pickeringii var. pattersonii	A Stylisma	S1	G4T4		
Sullivantia sullivantii	Sullivantia	S2	G4		
Symphoricarpos occidentalis	Wolfberry	S1	G5		
Symphyotrichum ciliatum	Rayless Alkali Aster	SH	G5		

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FLOWERING PLANTS (Cont.)					
Symphytotrichum dumosum var. strictior	Tradescant Aster	S2	G5T4		
Symphytotrichum racemosum var. subdumosum	Small White Aster	S2	G4G5T3T5Q		
Symphytotrichum subulatum var. ligulatum	Saltmarsh Aster	S2	G5		
Thalia dealbata	Water Canna	S2	G4		
Thelesperma filifolium	Thelesperma	S2	G4G5		
Tipularia discolor	Crane-fly Orchid	S2	G4G5		
Torreyochloa pallida var. pallida	Pale Manna Grass	S1	G5T5?		
Tradescantia ozarkana	Ozark Spiderwort	S2	G3		
Tragia cordata	Heart-leaved Noseburn	S2	G4		
Tragia ramosa	A Noseburn	S2	G5		
Trautvetteria caroliniensis	False Bugbane	S2	G5		
Trepocarpus aethusae	Trepocarpus	S1	G4G5		
Triadenum tubulosum	Marsh St. John's Wort	S1	G4?		
Trichostema setaceum	Blue Curls	S1	G5		
Tridens flavus var. chapmanii	A Grass	S2	G5T3		
Tridens muticus var. elongatus	Slim Tridens	SH	G5T4?		
Trifolium carolinianum	Carolina Clover	SH	G5		
Trifolium stoloniferum	Running Buffalo Clover	S1	G3	E	E
Trillium nivale	Snow Trillium	S3?	G4		
Trillium pusillum var. ozarkanum	Ozark Wake Robin	S2	G3T3		
Triodanis holzingeri	A Venus' Looking Glass	SH	G4		
Triodanis lamprosperma	A Venus' Looking Glass	S2	G5?		
Turritis glabra	Tower Mustard	SH	G5		
Typha domingensis	Southern Cattail	S1	G4G5		
Ulmus crassifolia	Cedar Elm	S1	G5		
Ulmus thomasii	Rock Elm	S2	G5		
Urtica chamaedryoides	Weak Nettle	S1	G4G5		
Utricularia subulata	Slender Bladderwort	S1	G5		
Valerianella ozarkana	Ozark Corn Salad	S2	G3		
Veronica americana	American Brooklime	SH	G5		
Viburnum dentatum	Southern Arrow-wood	S1	G5		
Viburnum lentago	Nannyberry	S1	G5		
Viburnum ozarkense	Ozark Arrow Wood	S2S3	GNR		
Viburnum recognitum	Northern Arrow-wood	S1	G4G5		
Vicia ludoviciana var. leavenworthii	Louisiana Vetch	SH	G5T5		
Vicia minutiflora	Pygmy-flowered Vetch	SH	G5		
Viola macloskeyi ssp. pallens	Smooth White Violet	S2	G5T5		
Vitis rotundifolia var. rotundifolia	Muscadine	S1	G5T5		
Waldsteinia fragarioides ssp. fragarioides	Barren Strawberry	S2	G5T5		
Wolffia borealis	Dotted Watermeal	SU	G5		
Wolffia columbiana	Columbia Water-meal	SU	G5		
Wolffiella gladiata	Wolffiella	S1	G5		

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FLOWERING PLANTS (Cont.)					
Xyris jupicai	Yellow-eyed-grass	S1	G5		
Xyris torta	Yellow-eyed Grass	S1	G5		
Yucca arkansana	Arkansas Yucca	S2	G5		
Yucca glauca	Small Soapweed Yucca	S2	G5		
Zannichellia palustris var. major	Horned Pondweed	S3?	G5TNR		
Zigadenus elegans ssp. glaucus	White Camas	S2	G5T4T5		
Zigadenus nuttallii	Death Camas	S1	G5		
Zizania palustris var. interior	Interior Wild Rice	SH	G4G5T4T5		
Total Flowering Plant Records: 464					
FLATWORMS					
Macrocotyla glandulosa	Pink Planarian	S1	G2G3		
Macrocotyla lewisi	Lewis' Cave Planarian	S1	G1		
Sphalloplana evaginata	Perryville Cave Planarian	S1	G1G2		
Sphalloplana hubrichti	Hubricht's Cave Planarian	S1	G2G4		
Total Flatworm Records: 4					
MOLLUSKS					
Alasmidonta marginata	Elktoe	S2	G4		
Alasmidonta viridis	Slippershell Mussel	S2	G4G5		
Amnicola stygia	Stygian Cavesnail	S1	G1		
Anodonta suborbiculata	Flat Floater	S2	G5		
Anodontoides ferussacianus	Cylindrical Papershell	S1	G5		
Antrobia culveri	Tumbling Creek Cavesnail	S1	G1	E	E
Arcidens confragosus	Rock Pocketbook	S3	G4		
Cumberlandia monodonta	Spectaclecase	S3	G3		C
Cyprogenia aberti	Western Fanshell	S2	G2G3Q		
Discus nigrimontanus	Black Mountain Disc	S3	G4		
Elliptio crassidens	Elephantear	S1	G5	E	
Epioblasma florentina curtisii	Curtis Pearlymussel	S1	G1T1	E	E
Epioblasma triquetra	Snuffbox	S1	G3	E	
Epioblasma turgidula	Turgid Blossom	SX	GX		
Fontigens aldrichi	Ozark Springsnail	S4	G4		
Fontigens antroecetes	Enigmatic Cavesnail	S2	G2		
Fontigens proserpina	Proserpine Cavesnail	S1	G1		
Fusconaia ebena	Ebonyshell	S1	G4G5	E	
Gastrocopta cristata	Crested Snaggletooth	S1	G5		
Gastrocopta pellucida	Slim Snaggletooth	S1	G5		
Hendersonia occulta	Cherrystone Snail	S3	G4		
Lampsilis abrupta	Pink Mucket	S2	G2	E	E
Lampsilis higginsii	Higgins Eye	S1	G1	E	E
Lampsilis rafinesqueana	Neosho Mucket	S2	G2		C
Lampsilis reeviana brittsi	Northern Broken-ray	S3	G4T3		
Leptodea leptodon	Scaleshell	S1	G1G2	E	E
Leptoxis arkansensis	Arkansas Mudalia	S1	G1		
Ligumia recta	Black Sandshell	S2	G5		

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MOLLUSKS (Cont.)					
Lioplax sulculosa	Furrowed Lioplax	S1	G5		
Mesodon mitchellianus	Sealed Goblet	S1	G4		
Micromenetus sampsoni	A Freshwater Snail	S2	G2G3Q		
Millerelix deltoidea	A Snail	SU	G2		
Neohelix divesta	Ozark Whitelip	S3	G3G4		
Obovaria jacksoniana	Southern Hickorynut	S1	G2		
Obovaria olivaria	Hickorynut	S3	G4		
Patera perigrapta	Engraved Bladetooth	S2	G5		
Plectomerus dombeyanus	Bankclimber	S3	G5		
Plethobasus cyphus	Sheepnose	S2	G3	E	C
Pleurocera alveare	Rough Hornsnail	S1S3	G3		
Potamilus capax	Fat Pocketbook	S1	G1G2	E	E
Ptychobranchus occidentalis	Ouachita Kidneyshell	S3	G3G4		
Pyrgulopsis scalariformis	Moss Pyrg	S1	G1		
Quadrula cylindrica cylindrica	Rabbitsfoot	S1	G3G4T3		
Quadrula fragosa	Winged Mapleleaf	S1	G1	E	E
Quadrula nodulata	Wartyback	S3	G4		
Simpsonaias ambigua	Salamander Mussel	S1	G3		
Somatogyrus depressus	Sandbar Pebblesnail	S?	G2		
Somatogyrus rosewateri	Chert Pebblesnail	S1	G1		
Stagnicola elodes	Marsh Pondsnailed	S2	G5		
Stenotrema stenotrema	Inland Slitmouth	S3	G5		
Strobilops affinis	Eightfold Pinecone	S2	G4G5		
Toxolasma lividus	Purple Lilliput	S2	G2		
Toxolasma texasiensis	Texas Lilliput	S3	G4		
Triodopsis cragini	Post Oak Threetooth	SH	G4		
Ventridens demissus	Perforate Dome	SU	G5		
Vertigo oscariana	Capital Vertigo	S1	G4		
Zonitoides limatulus	Dull Gloss	S1	G4G5		
Total Mollusk Records: 57					
ARACHNIDS					
Apochthonius mysterius	Mystery Cave Pseudoscorpion	S1	G1G2		
Apochthonius typhlus	Stone County Cave Pseudoscorpion	S1	G1G2		
Hesperochernes occidentalis	Guano Pseudoscorpion	S3	G5		
Mundochthonius cavernicolus	Cavernicolous Pseudoscorpion	SU	G1G2		
Phanetta subterranea	Subterranean Cave Spider	S1	G5		
Porrhomma cavernicola	Cavernicolous Porrhomma Spider	S2	G5		
Total Arachnid Records: 6					

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CRUSTACEANS					
Allocrangonyx hubrichti	Hubricht's Long-tailed Amphipod	S3	G3		
Batrurus brachycaudus	Short-tailed Groundwater Amphipod	S4	G4		
Batrurus hubrichti	Sword-tail Cave Amphipod	S1	G4		
Batrurus pseudomucronatus	False Sword-tailed Cave Amphipod	S2	G2G3		
Brackenridgia ashleyi	Ashley's Isopod	S2	G1G3		
Caecidotea antricola	Cave Isopod	S4	G5		
Caecidotea dimorpha	An Isopod	S1S3	G2G3		
Caecidotea fustis	Fustis Cave Isopod	S2	G2G3		
Caecidotea salemensis	Salem Cave Isopod	S2	G4		
Caecidotea serrata	Serrated Cave Isopod	S1	G1G2		
Caecidotea stiladactyla	Slender-fingered Cave Isopod	S1	G3G4		
Caecidotea stygia	Stygian Cave Isopod	S1	G5		
Cambarellus puer	Cajun Dwarf Crayfish	S3?	G5		
Cambarellus shufeldtii	Shufeldt's Dwarf Crayfish	S3?	G5		
Cambarus aculabrum	Cave Crayfish	SP	G1		E
Cambarus hubrichti	Salem Cave Crayfish	S3	G4		
Cambarus maculatus	Freckled Crayfish	S3	G4		
Cambarus setosus	Bristly Cave Crayfish	S3	G3		
Diacyclops yeatmani	Yeatman's Groundwater Copepod	S1S3	G2G3		
Fallicambarus fodiens	Digger Crayfish	S2S3	G5		
Faxonella clypeata	Shield Crayfish	S2S3	G5		
Lirceus megapodus	An Isopod	SU	GNR		
Macrobrachium ohione	Freshwater Shrimp	S1	G4		
Orconectes eupunctus	Coldwater Crayfish	S2	G2		
Orconectes harrisonii	Belted Crayfish	S3	G3		
Orconectes lancifer	Shrimp Crayfish	S1S2	G5		
Orconectes marchandi	Mammoth Spring Crayfish	S1S2	G2		
Orconectes meeki meeki	Meek's Crayfish	S1	G4		
Orconectes peruncus	Big Creek Crayfish	S2	G2		
Orconectes quadruncus	St. Francis River Crayfish	S2	G2		
Orconectes stygocaneyi	Caney Mountain Cave Crayfish	S1	G1		
Orconectes williamsi	Williams' Crayfish	S2	G3G4		
Procambarus viaeviridis	Vernal Crayfish	S3?	G5		
Stygobromus barri	Barr's Groundwater Amphipod	S1S3	G2G3		
Stygobromus clantoni	Clanton's Groundwater Amphipod	S1S3	G4		
Stygobromus heteropodus	Pickle Springs Amphipod	SX	G1G2		
Stygobromus onondagaensis	Onondaga Cave Amphipod	S3?	G5		
Stygobromus ozarkensis	Ozark Cave Amphipod	S3?	G4		
Stygobromus subtilis	Subtle Groundwater Amphipod	S1S3	G3G4		
Triops longicaudatus	Tadpole Shrimp	SU	G5		
Total Crustacean Records: 40					

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MILLIPEDES					
Causeyella dendropus	Causeyella Cave Millipede	S2	G1G3		
Chaetaspis aleyorum	Aleys' Cave Millipede	S1	G1		
Tingupa pallida	Tingupa Cave Millipede	S4	G4		
Zosteractis interminata	Zosteractis Cave Millipede	SU	G2G3		
Total Millipede Records: 4					
INSECTS					
Acroneuria ozarkensis	Ozark Stone	S2	G2		
Agapetus artesus	Artesian Agapetus Caddisfly	S3	G3		
Aleochara speculicollis	A Staphylinid Beetle	SU	GNR		
Allocapnia pygmaea	Pygmy Snowfly	S3	G5		
Alloperla hamata	Barbed Sallfly	S3	G4		
Alloperla leonarda	Truncate Sallfly	S3	G4		
Amblytropidia mysteca	A Glade Grasshopper	SU	G5		
Andrena beameri	An Andrenid Bee	S3	GNR		
Arrhopalites clarus	Clarus Cave Springtail	S3	G4		
Attaneuria ruralis	Giant Stone	S3	G4		
Baetisca obesa	A Mayfly	S3	G5		
Beameria venosa	A Concealed-tymbal Cicada	S3	GNR		
Biblopectus chickasaw	A Staphylinid Beetle	SU	GNR		
Calephelis borealis	Northern Metalmark	S1	G3G4		
Calephelis muticum	Swamp Metalmark	S3	G3		
Camptonotus carolinensis	Carolina Leaf Roller Camel Cricket	SU	GNR		
Catocala marmorata	Marbled Underwing Moth	S3	G3G4		
Catocala pretiosa texarkana	Precious Underwing Moth	S3?	G4T4		
Ceratopsyche piatrix	A Net-spinning Caddisfly	S4	G4		
Chalybion zimmermanni	A Blue Mud Dauber	SU	GNRTNR		
Cicindela celeripes	Swift Tiger Beetle	S1	G1G3		
Cicindela circumpecta johnsonii	Saline Spring Tiger Beetle	S1	G5T5		
Cicindela pruinina	Loamy-ground Tiger Beetle	S1	GNR		
Conocephalus saltans	Prairie Meadow Katydid	S3	GNR		
Deinopsis virginiana	A Staphylinid Beetle	SU	GNR		
Derops divalis	A Staphylinid Beetle	S3	GNR		
Euphyes dukesi	Duke's Skipper	S1	G3		
Formica creightoni	Creighton's Slavemaking Ant	S3	GNR		
Formica fossiceps	An Ant	SU	GNR		
Formica querquetulana	An Ant	S3	GNR		
Gennadota canadensis	A Staphylinid Beetle	SU	GNR		
Glyphopsyche missouri	Missouri Glyphopsyche Caddisfly	S1	G1		
Gomphus fraternus	Midland Clubtail	SU	G5		
Gomphus ventricosus	Skillet Clubtail	SU	G3		
Gryllotalpa major	Prairie Mole Cricket	S3	G3		
Hesperia ottoe	Ottoe Skipper	S1	G3G4		

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INSECTS (Cont.)					
Hesperus stehri	A Staphylinid Beetle	SU	GNR		
Hydroperla fugitans	Austin Springfly	S3	G3		
Inscudderella taxodii	Bald Cypress Katydid	S1	GNR		
Isoperla burksi	Banded Stripetail	S3	G4		
Isoperla longiseta	Plains Stripetail	SX	G5		
Leptysmia marginicollis	Cattail Toothpick Grasshopper	S2S3	G5		
Leucotrichia pictipes	A Micro Caddisfly	S3	G5		
Lordithon niger	A Staphylinid Beetle	S3	GU		
Lytrosis permagnaria	Geometrid Moth	SU	G3G4		
Melanoplus fasciatus	Huckleberry Grasshopper	S3	G5		
Melanoplus impudicus	Immodest Grasshopper	S3	G4G5		
Melanoplus packardii	Packard's Grasshopper	S2	G5		
Melanoplus punctulatus griseus	Grizzly Grasshopper	SU	G4T4		
Melanoplus viridipes viridipes	Green-legged Grasshopper	S3	G4		
Melissodes intorta	A Callirhoe Bee	S1	GNR		
Mermiria picta	Mermiria Grasshopper	S3	G5		
Merope tuber	A Meropid Scorpionfly	S3	G3G5		
Metaleptea brevicornis	Short-horned Grasshopper	S4	G5		
Nehalennia gracilis	Sphagnum Sprite	S1?	G5		
Neoconocephalus bivocatus	Two-voiced Conehead Katydid	S3	GNR		
Neoconocephalus exiliscanorus	Slightly-musical Conehead Katydid	S3	GNR		
Neoconocephalus lyristes	Bog Conehead Katydid	S3	GNR		
Neoconocephalus retusus	Round-tipped Conehead Katydid	S4?	GNR		
Neoperla carlsoni	Spiny Stone	S3?	G4		
Neotrichia kitae	Kite's Neotrichian Caddisfly	SU	GU		
Neotridactylus apicalis	Larger Pygmy Grasshopper	SU	GNR		
Nicrophorus americanus	American Burying Beetle	SH	G2G3	E	E
Ochrotrichia contorta	Contorted Ochrotrichian Micro Caddisfly	SU	G1G2		
Oecleus chrisjohni	A Cixiid Planthopper	SU	GNR		
Oncopodura hoffi	Hoff's Cave Springtail	S1S3	G1G2		
Oxybleptes kiteleyi	A Staphylinid Beetle	SU	GNR		
Pardalophora saussurei	A Glade Grasshopper	S3	G5		
Paroxya hoosieri	Hoosier Grasshopper	S1	G5		
Pentacora signoreti	A Shore Bug	S1	GNR		
Phoetaliotes nebrascensis	Large-headed Grasshopper	S3	G5		
Phrixocnemis truculentus	Truculent Camel Cricket	SU	GNR		
Phyllobrotica lengi	A Leaf Beetle	SU	GNR		
Phyllobrotica nigratarsus	A Leaf Beetle	SU	GNR		
Phyllobrotica physostegiae	A Leaf Beetle	S4?	GNR		
Ponera exotica	An Ant	S3	GNR		
Prostoia similis	Longhorn Forestfly	S3	G5		
Pseudosinella espana	Espana Cave Springtail	S3	G2G3		

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INSECTS (Cont.)					
<i>Psinidia fenestralis</i>	Sand Grasshopper	S2S3	G5		
<i>Satyrodes appalachia leeuwi</i>	Appalachian Eyed Brown	S1	G4T4		
<i>Sepedophilus campbelli</i>	A Staphylinid Beetle	SU	GNR		
<i>Serratella frisoni</i>	Frison's Seratellan Mayfly	S2	G4		
<i>Sinella avita</i>	Avita Cave Springtail	SU	G3G4		
<i>Sinella barri</i>	Barr's Cave Springtail	SU	G5		
<i>Somatochlora hineana</i>	Hine's Emerald	S2	G2G3	E	E
<i>Somatochlora ozarkensis</i>	Ozark Emerald	S2S3	G3		
<i>Speyeria diana</i>	Diana Fritillary	SA	G3G4		
<i>Speyeria idalia</i>	Regal Fritillary	S3	G3		
<i>Stenonema bednariki</i>	A Heptageniid Mayfly	S3	G2G4		
<i>Stethophyma celatum</i>	Sedge Grasshopper	S3	G4		
<i>Stylurus notatus</i>	Elusive Clubtail	S2S3	G3		
<i>Tettigidea armata</i>	Spined Grouse Locust	S2S3	G5		
<i>Tomocerus missus</i>	Missus Cave Springtail	SU	G4		
<i>Trimerotropis maritima</i>	Seaside Grasshopper	SH	G5		
<i>Xenochalepus potomaca</i>	A Leaf Beetle	SU	GNR		
<i>Xenotrechus condei</i>	Northern Xenotrechus Cave Beetle	S1	G1G2		
<i>Xenotrechus denticollis</i>	Southern Xenotrechus Cave Beetle	S1	G1G2		
<i>Xylodromus capito</i>	A Staphylinid Beetle	SU	GNR		
Total Insect Records: 103					
FISH					
<i>Acipenser fulvescens</i>	Lake Sturgeon	S1	G3G4	E	
<i>Alosa alabamae</i>	Alabama Shad	S2	G3		
<i>Amblyopsis rosae</i>	Ozark Cavefish	S2	G3	E	T
<i>Ameiurus nebulosus</i>	Brown Bullhead	S3?	G5		
<i>Ammocrypta clara</i>	Western Sand Darter	S2S3	G3		
<i>Ammocrypta vivax</i>	Scaly Sand Darter	S3	G5		
<i>Atractosteus spatula</i>	Alligator Gar	SU	G3G4		
<i>Carpionodes velifer</i>	Highfin Carpsucker	S2	G4G5		
<i>Centrarchus macropterus</i>	Flier	S3	G5		
<i>Cottus sp. 8</i>	Grotto Sculpin	S2	G1G2Q		C
<i>Crystallaria asprella</i>	Crystal Darter	S1	G3	E	
<i>Cyprinella camura</i>	Bluntnose Shiner	S2S3	G5		
<i>Erimyzon sucetta</i>	Lake Chubsucker	S2	G5		
<i>Etheostoma cragini</i>	Arkansas Darter	S3S4	G3G4		C
<i>Etheostoma euzonum erizonum</i>	Current Saddled Darter	S3	G3G4T3T4		
<i>Etheostoma euzonum euzonum</i>	Arkansas Saddled Darter	S2	G3G4T3T4		
<i>Etheostoma fusiforme</i>	Swamp Darter	S1	G5	E	
<i>Etheostoma histrio</i>	Harlequin Darter	S2	G5	E	
<i>Etheostoma microperca</i>	Least Darter	S2	G5		
<i>Etheostoma nianguae</i>	Niangua Darter	S2	G2	E	T
<i>Etheostoma parvipinne</i>	Goldstripe Darter	S1	G4G5	E	

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FISH (Cont.)					
Etheostoma whipplei	Redfin Darter	S1	G4	E	
Forbesichthys agassizi	Spring Cavefish	S1	G4G5	E	
Fundulus chrysotus	Golden Topminnow	S1	G5		
Fundulus dispar	Starhead Topminnow	S2	G4		
Fundulus kansae	Northern Plains Killifish	S2	GNR		
Fundulus sciadicus	Plains Topminnow	S3	G4		
Hiodon tergisus	Mooneye	S3	G5		
Hybognathus argyritis	Western Silvery Minnow	S2	G4		
Hybognathus hankinsoni	Brassy Minnow	S3	G5		
Hybognathus hayi	Cypress Minnow	S1	G5	E	
Hybognathus nuchalis	Mississippi Silvery Minnow	S3S4	G5		
Hybognathus placitus	Plains Minnow	S2	G4		
Hybopsis amnis	Pallid Shiner	SX	G4		
Ichthyomyzon gagei	Southern Brook Lamprey	S2S3	G5		
Lampetra appendix	American Brook Lamprey	S2	G4		
Lepomis marginatus	Dollar Sunfish	SU	G5		
Lepomis symmetricus	Bantam Sunfish	S2	G5		
Macrhybopsis gelida	Sturgeon Chub	S3	G3		
Macrhybopsis meeki	Sicklefin Chub	S3	G3		
Macrhybopsis storeriana	Silver Chub	S3	G5		
Mugil cephalus	Striped Mullet	SA	G5		
Notropis buchanani	Ghost Shiner	S2	G5		
Notropis chalybaeus	Ironcolor Shiner	S1	G4		
Notropis heterolepis	Blacknose Shiner	S2	G4		
Notropis maculatus	Taillight Shiner	S1	G5	E	
Notropis ozarcus	Ozark Shiner	S2	G3		
Notropis sabinae	Sabine Shiner	S1	G4	E	
Notropis texanus	Weed Shiner	S3	G5		
Notropis topeka	Topeka Shiner	S1	G3	E	E
Noturus eleutherus	Mountain Madtom	S1S2	G4	E	
Noturus flavater	Checkered Madtom	S3S4	G3G4		
Noturus placidus	Neosho Madtom	S1	G2	E	T
Opsopoeodus emiliae	Pugnose Minnow	S4	G5		
Percina copelandi	Channel Darter	S3	G4		
Percina cymatotaenia	Bluestripe Darter	S2	G2		
Percina nasuta	Longnose Darter	S1	G3	E	
Percina shumardi	River Darter	S3	G5		
Percina uranidea	Stargazing Darter	S2	G3		
Percopsis omiscomaycus	Trout-perch	S1?	G5		
Pimephales tenellus parviceps	Eastern Slim Minnow	S2S3	G4T2T3		
Pimephales tenellus tenellus	Western Slim Minnow	S3	G4T4		
Platygobio gracilis	Flathead Chub	S1	G5	E	
Scaphirhynchus albus	Pallid Sturgeon	S1	G2	E	E
Typhlichthys subterraneus	Southern Cavefish	S2S3	G3G4		
Umbra limi	Central Mudminnow	S1	G5	E	
Total Fish Records: 66					

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
AMPHIBIANS					
Ambystoma annulatum	Ringed Salamander	S3	G4		
Ambystoma talpoideum	Mole Salamander	S2	G5		
Ambystoma tigrinum	Eastern Tiger Salamander	SU	G5		
Amphiuma tridactylum	Three-toed Amphiuma	S2	G5		
Anaxyrus cognatus	Great Plains Toad	SU	G5		
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	S1	G3G4T3T4	E	
Cryptobranchus alleganiensis bishopi	Ozark Hellbender	S1	G3G4T2Q	E	C
Eurycea spelaea	Grotto Salamander	S2S3	G4		
Hemidactylium scutatum	Four-toed Salamander	S4	G5		
Lithobates areolatus circulosus	Northern Crawfish Frog	S3	G4T4		
Lithobates pipiens	Northern Leopard Frog	S2	G5		
Lithobates sylvaticus	Wood Frog	S3	G5		
Necturus maculosus louisianensis	Red River Mudpuppy	SU	G5T4		
Necturus maculosus maculosus	Common Mudpuppy	SU	G5T5		
Pseudacris illinoensis	Illinois Chorus Frog	S2	G5T3		
Scaphiopus holbrookii	Eastern Spadefoot	S2	G5		
Total Amphibian Records: 16					
REPTILES					
Cemophora coccinea copei	Northern Scarletsnake	S2S3	G5T5		
Clonophis kirtlandii	Kirtland's Snake	S1	G2		
Crotaphytus collaris	Eastern Collared Lizard	S4	G5		
Deirochelys reticularia miaria	Western Chicken Turtle	S1	G5T5	E	
Emydoidea blandingii	Blanding's Turtle	S1	G4	E	
Farancia abacura reinwardtii	Western Mudsnake	S2	G5T5		
Heterodon gloydi	Dusty Hog-nosed Snake	S1	G5T3T4Q		
Heterodon nasicus	Plains Hog-nosed Snake	SX	G5		
Kinosternon flavescens	Yellow Mud Turtle	S1	G5	E	
Macrochelys temminckii	Alligator Snapping Turtle	S2	G3G4		
Nerodia cyclopion	Mississippi Green Watersnake	SX	G5	E	
Opheodrys vernalis	Smooth Greensnake	SX	G5		
Pantherophis vulpinus	Western Foxsnake	S1	G5	E	
Phrynosoma cornutum	Texas Horned Lizard	S2	G4G5		
Plestiodon obsoletus	Great Plains Skink	S2	G5		
Plestiodon septentrionalis obtusirostris	Southern Prairie Skink	S3	G5T5		
Plestiodon septentrionalis septentrionalis	Northern Prairie Skink	S3	G5T5		
Sistrurus catenatus catenatus	Eastern Massasauga	S1	G3G4T3T4Q	E	C
Total Reptile Records: 18					

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
BIRDS (See Appendix A for Tracking Criteria)					
Accipiter striatus	Sharp-shinned Hawk	S3	G5		
Aimophila aestivalis	Bachman's Sparrow	S2	G3	E	
Anhinga anhinga	Anhinga	SX	G5		
Ardea alba	Great Egret	S3	G5		
Asio flammeus	Short-eared Owl	S2	G5		
Asio otus	Long-eared Owl	SU	G5		
Bonasa umbellus	Ruffed Grouse	SU	G5		
Botaurus lentiginosus	American Bittern	S1	G4	E	
Buteo swainsoni	Swainson's Hawk	S2	G5		
Campephilus principalis	Ivory-billed Woodpecker	SX	G1		E
Certhia americana	Brown Creeper	SU	G5		
Chlidonias niger	Black Tern	SX	G4		
Circus cyaneus	Northern Harrier	S2	G5	E	
Cistothorus palustris	Marsh Wren	S3	G5		
Conuropsis carolinensis	Carolina Parakeet	SX	GX		
Coragyps atratus	Black Vulture	S3	G5		
Corvus corax	Common Raven	SX	G5		
Coturnicops noveboracensis	Yellow Rail	SU	G4		
Cygnus buccinator	Trumpeter Swan	SX	G4		
Dendroica cerulea	Cerulean Warbler	S2S3	G4		
Dendroica pensylvanica	Chestnut-sided Warbler	S3	G5		
Ectopistes migratorius	Passenger Pigeon	SX	GX		
Egretta caerulea	Little Blue Heron	S3	G5		
Egretta thula	Snowy Egret	S2	G5	E	
Elanoides forficatus	Swallow-tailed Kite	SX	G5		
Empidonax minimus	Least Flycatcher	SU	G5		
Falco peregrinus	Peregrine Falcon	S1	G4	E	
Gallinula chloropus	Common Moorhen	S2	G5		
Geococcyx californianus	Greater Roadrunner	S3	G5		
Grus canadensis	Sandhill Crane	SU	G5		
Haliaeetus leucocephalus	Bald Eagle	S3	G5		
Ictinia mississippiensis	Mississippi Kite	S3	G5		
Ixobrychus exilis	Least Bittern	S3	G5		
Lanius ludovicianus	Loggerhead Shrike	S2	G4		
Laterallus jamaicensis	Black Rail	S1	G4		
Limnothlypis swainsonii	Swainson's Warbler	S2	G4	E	
Nycticorax nycticorax	Black-crowned Night-heron	S3	G5		
Pandion haliaetus	Osprey	SU	G5		
Passerina ciris	Painted Bunting	S3	G5		
Picoides borealis	Red-cockaded Woodpecker	SX	G3		E
Porzana carolina	Sora	S2	G5		
Rallus elegans	King Rail	S1	G4	E	
Rallus limicola	Virginia Rail	S2	G5		
Sitta pusilla	Brown-headed Nuthatch	SX	G5		
Sterna antillarum athalassos	Interior Least Tern	S1	G4T2Q	E	E
Tympanuchus cupido	Greater Prairie-chicken	S1	G4	E	

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
BIRDS (Cont.)					
Tyto alba	Barn Owl	S3	G5		
Vermivora bachmanii	Bachman's Warbler	SX	GH		E
Wilsonia citrina	Hooded Warbler	S3	G5		
Xanthocephalus xanthocephalus	Yellow-headed Blackbird	S3	G5		
Total Bird Records: 50					

MAMMALS

Bos bison	American Bison	SX	G4		
Canis lupus	Gray Wolf	SX	G4		E
Canis rufus	Red Wolf	SX	G1Q		E
Cervus canadensis	Elk or Wapiti	SX	G5		
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	SU	G3G4		
Corynorhinus townsendii ingens	Ozark Big-eared Bat	SX	G4T1	E	E
Lasionycteris noctivagans	Silver-haired Bat	SU	G5		
Lasiurus seminolus	Seminole Bat	SA	G5		
Lepus californicus	Black-tailed Jackrabbit	S1	G5	E	
Lepus townsendii	White-tailed Jackrabbit	SX	G5		
Mustela frenata	Long-tailed Weasel	S3	G5		
Mustela nivalis	Least Weasel	S3	G5		
Myotis austroriparius	Southeastern Bat	S1	G3G4		
Myotis grisescens	Gray Bat	S3	G3	E	E
Myotis leibii	Eastern Small-footed Myotis	SU	G3		
Myotis sodalis	Indiana Bat	S1	G2	E	E
Ochrotomys nuttalli	Golden Mouse	S3	G5		
Oryzomys palustris	Rice Rat	SU	G5		
Perognathus flavescens	Plains Pocket Mouse	S2	G5		
Peromyscus gossypinus	Cotton Mouse	S2	G5		
Puma concolor	Mountain Lion	SX	G5		
Reithrodontomys montanus	Plains Harvest Mouse	S2	G5		
Spermophilus franklinii	Franklin's Ground Squirrel	S2S3	G5		
Spermophilus tridecemlineatus	Thirteen-lined Ground Squirrel	SU	G5		
Spilogale putorius interrupta	Plains Spotted Skunk	S1	G5T4	E	
Sylvilagus aquaticus	Swamp Rabbit	S2	G5		
Tadarida brasiliensis	Brazilian Free-tailed Bat	SA	G5		
Taxidea taxus	American Badger	SU	G5		
Ursus americanus	Black Bear	S3	G5		

Total Mammal Records: 30

Total Records Processed: 1042

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FOR MORE INFORMATION

The Missouri Department of Conservation collects and manages information on the location and status of species of conservation concern throughout the state. The Natural Heritage Database is a repository for this information.

If you have information on the location or questions about the status of any element on this checklist, please write or call:

Heritage Coordinator
Missouri Department of Conservation
P.O. Box 180
2901 W Truman Blvd
Jefferson City, MO 65109
(573) 522-4115

If you are requesting information about the location of any element on this checklist for the purposes of environmental review, please write:

Policy Coordination
Missouri Department of Conservation
P.O. Box 180
Jefferson City, MO 65109

WEBPAGE

This checklist is updated annually. The most current version is always available by contacting the Missouri Department of Conservation, Resource Science Division. *Checklist* information is also available on the Missouri Department of Conservation's website: <http://mdc.mo.gov/145>.

CITATION

An appropriate citation for this edition of the *Checklist* is:

Missouri Natural Heritage Program. 2010. Missouri species and communities of conservation concern checklist. Missouri Department of Conservation. Jefferson City, Missouri. pp. 53.

APPENDIX A
BIRD SPECIES TRACKED IN HERITAGE AND THEIR CRITERIA FOR EOs
Updated September 10, 2004

<u>SPECIES (ranks)</u>	<u>REGIONS</u>	<u>CRITERIA (safe dates), COMMENTS</u>
Anseriformes (Ducks, geese, swans)		
Trumpeter Swan (SX, G4)	All (NE, NW)	1
Galliformes (chicken-like birds)		
Ruffed Grouse (SU, G5)	CE, OZ, SL, SE	1
Greater Prairie-chicken (S1, G4)	SW, KC, NW, NE	Anytime observed
Pelecaniformes (pelicans, cormorants, darters)		
Anhinga (SX, G5)	SE	1
Ciconiiformes (herons, egrets, storks, ibises, vultures)		
American Bittern (S1, G4)	All	1 – extensive emergent marshes
Least Bittern (S3, G5)	All	1,2 (5/25-8/1)
Great Egret (S3, G5)	All (SE)	1
Snowy Egret (S2, G5)	SE	1
Little Blue Heron (S3, G5)	SE, SL	1
Black-crowned Night-Heron (S3, G5)	All (SE)	1
Black Vulture (S3, G5)	OZ, SE	1
Falconiformes (hawks, falcons, eagles, kites)		
Osprey (SU, G5)	All (confirmed NE, SW)	1 – Any large open body of water
Mississippi Kite (S3, G5)	All (SE, SL, NE)	1 – Expanding range
Bald Eagle (S3, G4)	All	1 – Any large open body of water
Northern Harrier (S2, G5)	All (except OZ, SE)	1
Sharp-shinned Hawk (S3, G5)	All	1
Swallow-tailed Kite (SX, G5)	SE	1 – Formerly SE, large rivers
Swainson's Hawk (S2, G5)	SW, KC	1
Peregrine Falcon (S1, G4)	SL, KC	1 – Formerly along MO river bluffs
Gruiformes (rails, cranes)		
Sandhill Crane (SU, G5)	NE, NW, CE, SL	1
Black Rail (S1, G4)	All	Anytime observed, large marshes
Yellow Rail (SU, G4)	All	Anytime observed (migrant)
King Rail (S1, G4G5)	All (SE, SL, NE)	1,2 (5/30-7/31)
Virginia Rail (S2, G5)	All	1,2 (5/15-8/1)
Sora (S2, G5)	All	1,2 (5/30-7/31)
Common Moorhen (S2, G5)	All (except OZ)	1,2 (5/30-8/31)
Charadriiformes (gulls, terns, shorebirds)		
Interior Least Tern (S1, G4T2Q)	SE	1 – Formerly along MS, MO Rivers
Black Tern (SX, G4)	NW	1
Cuculiformes (cuckoos, roadrunners)		
Greater Roadrunner (S3, G5)	SW, OZ	Anytime observed
Strigiformes (owls)		
Barn Owl (S3, G5)	All (SE)	1,2 (5/25-8/15)
Long-eared Owl (SU, G5)	All	1 – Forests, dense thickets near water
Short-eared Owl (S2, G5)	SW, NW, NE, KC	1,2 (5/1-8/31)
Piciformes (woodpeckers)		
Red-cockaded Woodpecker (SX, G3)	OZ, SE	Anytime observed

<u>SPECIES (ranks)</u>	<u>REGIONS</u>	<u>CRITERIA (safe dates), COMMENTS</u>
Passeriformes (perching birds)		
Least Flycatcher (SU, G5)	NE, NW	1,2 (5/27-7/7)
Loggerhead Shrike (S2, G5)	All (SW, KC, NW)	1,2 (4/20-7/20)
Brown-headed Nuthatch (SX, G5)	OZ, SE	Anytime observed
Brown Creeper (SU, G5)	SL, NE, OZ	1,2 (5/15-9/15)
Marsh Wren (S3, G5)	All (except SW, SE, OZ)	1,2 (5/25-8/25)
Chestnut-sided Warbler (S3, G5)	All	1,2 (6/1-8/10)
Hooded Warbler (S3, G5)	SE, OZ, SW, SL	1,2 (5/25-7/25)
Cerulean Warbler (S2S3, G4)	All (OZ)	1,2 (6/1-8/10)
Swainson's Warbler (S2, G4)	SE, OZ, SW	1,2 (5/25-8/15)
Bachman's Sparrow (S2, G3)	OZ, SW, SE	1,2 (6/1-8/15)
Painted Bunting (S3, G5)	SW, OZ	1,2 (5/25-8/1)
Yellow-headed Blackbird (S3, G5)	NW (possible anywhere)	1

MDC Region Abbreviations (regions listed are those in which the species is most likely to be recorded):

CE – Central	KC – Kansas City
NE – Northeast	NW – Northwest
OZ – Ozark	SL – St. Louis
SE – Southeast	SW – Southwest

Explanation of Criteria

1. Confirmed breeding. Evidenced one or more of the following:

- Nest building (except wrens and woodpeckers)
- Nest with egg(s) or young (seen or heard)
- Used nest or eggshells
- Physiological evidence of breeding based upon bird in hand (e.g. brood patch)
- Distraction display or injury feigning
- Recently fledged young
- Adults entering or leaving nest site in circumstances indicating nesting
- Adult carrying fecal sac
- Adult carrying food

2. Probable or possible breeding (valid only between safe dates)

Probable

- Male and female seen together (not part of a flock)
- Bird holding territory
- Seven or more singing males detected in one visit
- Courtship or copulation
- Visiting probable nest site
- Agitated behavior or anxiety call (not provoked by observer)
- Nest building by wrens or woodpeckers

Possible

- Species heard or seen in breeding habitat

PLANTS OF CONSERVATION CONCERN REPORTING FORM

HERITAGE BOTANIST and LAB USE ONLY

EO Report Status (check one): New _____ Update **with** mapping _____ Update **without** mapping _____
 EO_ID: _____ SRANK: _____
 ELCODE: _____ EONUM: _____ State Status: _____
 Federal Status: _____
 Heritage Biologist: _____
 Date: _____
 Mapper _____ Map_QC _____
 Tracker _____ Tracker_QC _____

ELEMENT IDENTIFICATION and LOCATION

Scientific Name: _____ Common Name: _____

Identification Problems: Y N Explain: _____

If surveying known site, was species relocated? Y N

Survey Site Name: _____

Directions to the survey site (include landmarks, roads, towns, distances, compass directions): _____

County(ies): _____

USGS Quadrangle names: _____

Twp _____ Rng _____ Sec _____ ¼ Sec _____ Elev _____ (ft or m)

If using a GPS unit, please collect data in NAD83, zone 15; if unfeasible, indicate: NAD _____ zone _____

UTM: Easting (X) _____ OR: Latitude (N) _____

Northing (Y) _____ Longitude (W) _____

Explanation of possible GPS unit inaccuracy: _____

SURVEY INFORMATION

Survey Date: ____ - ____ - ____ (yyyy-mm-dd)

Surveyor(s) (principal surveyor first; last name, first name): _____

Phone #: (____) _____ - _____ E-mail address: _____

Street Address: _____

TOPOGRAPHIC MAP (mandatory) Attach a copy of the topographic map or DOQ (no county maps, please!) with the species' location marked. Please identify *who* marked the map (i.e., observer, transcriber, updater, or Heritage Biologist).

Use the following guidelines to draw the source's location on the map as precisely as possible. Note: Heritage mappers will digitize exactly what is drawn on your map.

- Use a fine tip pen to mark a pen point or thin solid line identifying the source location. If the element occurrence or source boundary follows the edge of a lake, stream, road or other feature, draw the boundary precisely on the edge of the feature.
- Disjunct patches of the same element occurrence should be mapped separately and # observed indicated at each site.
- If you are not certain you can draw the observed area's exact location, draw a boundary line inclusive of the entire area where you are certain the source was observed. Draw as small an area as you can while still being certain it contains the actual location of the observed element. Where possible, use features on the map such as roads, streams, contour lines, etc., to delineate this area. For example, draw a line along the stretch of trail where the EO was observed.

Locational Uncertainty: How accurate is your depiction of the source's location on the map?

The mapped location is within (circle appropriate buffer radius in meters): 0 6.25 25 50 100 200 400 800 1500 4000

OR, specify your own estimate: _____ m or _____ ft or _____ mi

ELEMENT OCCURRENCE DATA

If illustration/photograph/slide taken, give artist/photographer, year, subject, and repository: _____

If specimen collected, give collector, collection #, year, acquisition number and repository: _____

Abundance:

Number (individuals, clumps, or colonies) observed: _____

Area of Occupancy (preferably acres or hectares): _____

Person hours spent searching for this Element? _____

Condition (plants sterile, in bud, flower or fruit, evidence of disease, predation, or exotics): _____

General Description (habitat): Describe the physical setting/context surrounding the EO, including a list of adjacent communities and surrounding land use. _____**CONSERVATION INFORMATION**

Name of Managed Area(s): A) _____ B) _____ C) _____

Is EO completely within boundaries of Managed Area(s)? Yes or Partially (*Y or P*) A) _____ B) _____ C) _____

Public Owner(s): _____

Private Owner(s): _____

Owner Comments (include address/phone number): _____

Management Comments (e.g., exotics, burn needed, current or potential threats, etc.) : _____

Protection Comments (e.g. legal actions/strategies needed to secure protection for the site): _____

General Comments (include associated species): _____

Form completed by (last, first name): _____ Date: _____

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.

Return to: Resource Science Division – Heritage Botanist, Missouri Department of Conservation,
P.O. Box 180, Jefferson City, Missouri 65102
573-552-4115**TO BE COMPLETED BY HERITAGE BOTANIST**

Origin Subrank: _____ EO Rank: _____ EO Rank Comments: _____

Specimen is reference: _____

Primary Reference: _____

Additional Reference(s): _____

Version Author: _____

ANIMALS OF CONSERVATION CONCERN REPORTING FORM

HERITAGE BIOLOGIST and LAB USE ONLY

EO Report Status (check one): New _____ Update **with** mapping _____ Update **without** mapping _____
 EO_ID: _____ Source Number: _____ SRANK: _____
 ELCODE: _____ EONUM: _____ State Status: _____
 Federal Status: _____
 Mapper: _____ Map_QC: _____ Heritage Biologist: _____
 Tracker: _____ Tracker_QC: _____ Date: _____

ELEMENT IDENTIFICATION and LOCATION

Scientific Name: _____ Common Name: _____
 Survey Site Name: _____
 Directions to the survey site (include landmarks, roads, towns, distances, compass directions): _____

 County(ies): _____
 USGS Quadrangle names: _____
 Twp _____ Rng _____ Sec _____ ¼ Sec _____
 If using a GPS unit, please collect data in NAD83, zone 15: if unfeasible, indicate: NAD _____ zone _____
 UTM: Easting (X) _____ OR: Latitude (N) _____
 Northing (Y) _____ Longitude (W) _____
 Explanation of possible GPS unit inaccuracy: _____

TOPOGRAPHIC MAP (mandatory) Attach a copy of the topographic map or DOQ (no county maps, please!) with the species' location clearly marked. Please identify *who* marked the map (i.e., observer, transcriber, updater, or Heritage Biologist).

Locational Uncertainty: How *accurate* is your depiction of the source's location on the map?

The mapped location is within (circle appropriate buffer radius in meters): 0 6.25 25 50 100 200 400 800 1500 4000
 OR, specify your own estimate: _____ m or _____ ft or _____ mi

SURVEY INFORMATION

Survey Date: ____ - ____ - ____ (yyyy-mm-dd)
 Surveyor(s) (principal surveyor first; last name, first name): _____
 Phone #: (____) _____ - _____ E-mail address: _____
 Street Address: _____

ELEMENT OCCURRENCE DATA

Abundance:
 Actual number (number of adults, juveniles, dens, etc.) observed: _____
 Estimated number(s) and basis for estimate: _____

 External Measurements: _____
 Condition (evidence of reproduction, disease/predation/injury, or exotics): _____
 If illustration/photograph/slide taken, give artist/photographer, year, subject, and repository: _____
 If specimen collected, give collector, collection #, year, acquisition number and repository: _____
 Sampling Methodology (briefly describe traps, seining, call count, etc.): _____

 Population Density (if practical): number: _____ per areal unit: _____ (i.e. meters², etc)
 Area of Occupancy (preferably acres or hectares): _____ Type of measurement: _____ Precise or _____ Estimate
 Person hours spent searching for this Element? _____

ELEMENT OCCURRENCE DATA (cont'd.)

General Description (habitat): Describe the physical setting/context surrounding the EO, including a list of adjacent communities and surrounding land use. _____

Location Use Class (circle one): Not applicable, Juvenile foraging area, Adult foraging area, Breeding, Nonbreeding, Transient Cave, Hibernaculum, Nursery area, Maternity Colony, Bachelor Colony, Migratory Corridor, Nonmigratory, Staging, Undetermined

CONSERVATION INFORMATION

Name of Managed Area(s): _____

Is EO completely within boundaries of Managed Area(s)? Yes or Partially (Y or P)

Public Owner(s): _____

Private Owner(s): _____

Owner Comments (include address/phone number): _____

Management Comments (e.g., exotics, burn needed, current or potential threats, etc.): _____

Protection Comments (e.g. legal actions/strategies needed to secure protection for the site): _____

Monitoring and Research Needs: _____

General Comments (include associated species): _____

Form completed by (last, first name): _____ **Date:** _____

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.
Return to: Resource Science Division – Heritage Zoologist, Missouri Department of Conservation,
 1110 S. College Ave., Columbia, Missouri 65201
 573-882-9880

TO BE COMPLETED BY HERITAGE BIOLOGIST

Origin Subrank: _____ **EO Rank:** _____ **EO Rank Comments:** _____

Reference(s): _____

Version Author: _____

TERRESTRIAL NATURAL COMMUNITY REPORTING FORM

HERITAGE ECOLOGIST and LAB USE ONLY

SRANK: _____ GELCODE: _____
ELCODE: _____ EONUM: _____ Gelcode Confidence Level (circle one): 1 2 3
Mapper: _____ Map_QC: _____ Heritage Biologist: _____
Tracker: _____ Tracker_QC: _____ Date: _____
Community Significance (circle one): Significant Exceptional Notable Updater: _____

ELEMENT IDENTIFICATION and LOCATION

EO_ID: _____
EO Report Status (check one): New _____ Update with mapping _____ Update without mapping _____
Surveyor(s) (principal surveyor first; last name, first name): _____
Transcriber (if different than Surveyor): _____ Transcriber Date: _____
Natural Community Name: _____
Identification Problems (circle one): Y N Explain: _____
Survey Site Name: _____
Directions to the survey site (include landmarks, roads, towns, distances, compass directions or GPS coordinates): _____
County(ies): _____
USGS Quadrangle Name(s): _____
Twp: _____ Rng: _____ Sec: _____ ¼ Sec: _____
Name of Managed Area(s): A) _____ B) _____ C) _____
Is EO completely within boundaries of Managed Area(s)? Yes or Partially (Y or P): A) _____ B) _____ C) _____
Owner(s): _____
Owner Comments : _____

MAP (Please attach a copy of a DOQ, aerial photo, or topographic map with site clearly marked)

Mapper (name of person who marked attached map): _____
Locational Uncertainty (How accurate is the mapped location of the actual location of the natural community?):
The mapped location is within (circle appropriate buffer radius in meters): 0 6.25 25 50 100 200 400 800 meters
OR, specify your own estimate: _____ m or _____ ft or _____ mi

ELEMENT OCCURRENCE DATA

Survey Date (yyyy-mm-dd): _____
Plant species composition (EODATA) (Format: Year:Surveyor's Last Name – 5 to 10 dominant or characteristic plant taxa by scientific name): _____
General Description (word picture of the natural community, including descriptions of topography and vegetation structure with different patches assigned acreage figures. For example, “a glade system with three openings of 1, 5 and 10 acres apiece.” If this EO is mapped as part of a natural community complex, describe what percentage of the total polygon is made up of this natural community type. For example, “30% of a complex with wet-prairie and freshwater marsh.”): _____
Natural Community Quality (EORANK) (Grade: A-D): _____ Quality (EORANK) Comments (Describe the natural community's ecological integrity; i.e., the degree to which it resembles presettlement condition, its lack of exotic species, the presence of conservative species, floristic quality index values, etc.): _____
Geology (substrate): _____ Acres: _____
Management Comments: _____
Protection Comments: _____
Monitoring and Research Comments : _____
General Comments: _____
Reference (Best source for more information): _____

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.
Return to: Resource Science Division – Heritage Ecologist, Missouri Department of Conservation,
1110 S College Ave., Columbia, Missouri 65201
573-882-9880
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AQUATIC NATURAL COMMUNITY REPORTING FORM

HERITAGE ECOLOGIST and LAB USE ONLY

SRANK: _____ **GELCODE:** _____
ELCODE: _____ **EONUM:** _____ **Gelcode Confidence Level** (circle one): 1 2 3
Mapper: _____ **Map_QC:** _____ **Heritage Biologist:** _____
Tracker: _____ **Tracker_QC:** _____ **Date:** _____
Community Significance (circle one): Significant Exceptional Notable **Updater:** _____

ELEMENT IDENTIFICATION and LOCATION

EO_ID: _____
EO Report Status (check one): New _____ Update **with** mapping _____ Update **without** mapping _____
Surveyor(s) (principal surveyor first; last name, first name): _____
Transcriber (if different than Surveyor): _____ **Transcriber Date:** _____
Aquatic Natural Community Name: _____
EDU _____ **AES Type** _____
Identification Problems (circle one): Y N **Explain:** _____
Survey Site Name: _____
Directions to the survey site (include landmarks, roads, towns, distances, compass directions or GPS coordinates): _____
County(ies): _____
USGS Quadrangle Name(s): _____
Twp: _____ **Rng:** _____ **Sec:** _____ **¼ Sec:** _____
Name of Managed Area(s): A) _____ B) _____ C) _____
Is EO completely within boundaries of Managed Area(s)? Yes or Partially (**Y or P**): A) _____ B) _____ C) _____
Owner(s): _____
Owner Comments : _____

MAP (Please attach a copy of a DOQ, aerial photo, or topographic map with site clearly marked)

Mapper (name of person who marked attached map): _____
Locational Uncertainty (How accurate is the mapped location of the actual location of the natural community?):
 The mapped location is within (circle appropriate buffer radius in meters): 0 6.25 25 50 100 200 400 800 meters
 OR, specify your own estimate: _____ **m** or _____ **ft** or _____ **mi**

ELEMENT OCCURRENCE DATA

Survey Date (yyyy-mm-dd): _____
Aquatic assemblage (EODATA) (Format: Year:Surveyor's Last Name – 5 to 10 dominant or characteristic fish and/or aquatic invertebrate taxa by scientific name): _____
General Description (word picture of the aquatic natural community, including stream order, miles to headwaters, riparian corridor condition, composition of riffles and pools, and other physical factors. If EO is mapped as part of a aquatic natural community complex, describe what percentage of the total polygon is made up of this natural community type): _____
Aquatic Natural Community Quality (EORANK) (Grade: A-D): _____ **Quality (EORANK) Comments** (Describe the natural community's ecological integrity; i.e., the degree to which it resembles presettlement condition, its lack of exotic species, the presence of conservative species, index of biotics integrity values, etc.): _____
Geology (substrate): _____ **Acres:** _____
Management Comments (include date and RAM monitoring site number): _____
Protection Comments: _____
Monitoring and Research Comments : _____
General Comments: _____
Reference (Best source for more information): _____

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.

Return to: Resource Science Division - Stream Ecologist, Missouri Department of Conservation,
 551 Joe Jones Blvd, West Plains, Missouri 65775-0138

417-256-0429